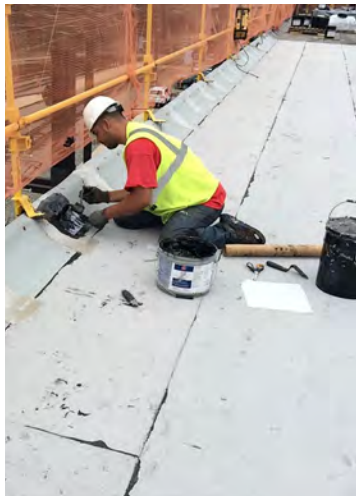
REBUILDING
the System

FISCAL YEAR 2017 CAPITAL BUDGET

Fiscal Years 2017–2028 Capital Program



FISCAL YEAR 2017 CAPITAL BUDGET

AND FISCAL YEARS 2017-2028 CAPITAL PROGRAM

"REBUILDING THE SYSTEM"

Approved by the SEPTA Board

May 26, 2016

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Overview and Summary

This document presents SEPTA's annual capital budget for Fiscal Year 2017 and the capital program for Fiscal Years 2017 through 2028. The annual capital budget and 12-year capital program describes the capital improvements SEPTA plans to undertake with anticipated funding. The budget is adopted by SEPTA's Board, and is reflected in the regional Transportation Improvement Program (TIP). SEPTA's capital budget document is organized as follows:

- Introduction to SEPTA
- Strategic planning efforts
- Sources of funds
- Uses of funds
- Funding projections and assumptions
- Rebuilding the System - Program Progress
- The FY 2017 Capital Budget and FY 2017-2028 Capital Program (Table)
- Descriptions of capital programs and individual projects
- Appendices (Alignment with Strategic Business Plan and Long-Term Planning Efforts)

SEPTA's FY 2017 Capital Budget totals **$548.63** million and the 12-year Capital Program totals **$7.3** billion. By comparison, the Board-approved FY 2016 Capital Budget totaled $534.54 million and the FY 2016-2027 program totaled $6.8 billion. The FY 2017 capital budget and 12-year capital program takes into account the new federal transportation funding authorization, the Fixing America's Surface Transportation (FAST) Act; funding from the Commonwealth of Pennsylvania generated by Act 89 legislation; as well as anticipated capital financing.

The "Rebuilding the System" program was initiated following the enactment of a long-term state transportation funding solution under Act 89. To bring SEPTA's assets to a state of good repair, the Authority is rehabilitating and replacing critical infrastructure and systems, such as substations, bridges and stations. The capital program includes safety and security enhancements, along with modernization of communication and signal equipment. The SEPTA Key project will replace antiquated fare collection systems with cutting-edge payment technology, allowing customers to move seamlessly throughout the SEPTA transit network. SEPTA will replace rail vehicles that have far exceeded their useful life, while enhancing accessibility and expanding capacity to address ridership growth. SEPTA will expand its fleet of hybrid buses and perform vehicle overhauls to optimize vehicle performance. The capital program also includes financial obligations such as capital leases and debt service.

Project status updates and photos for the Rebuilding the System program are available online at http://www.SEPTA.org/rebuilding.

Lenni Substation

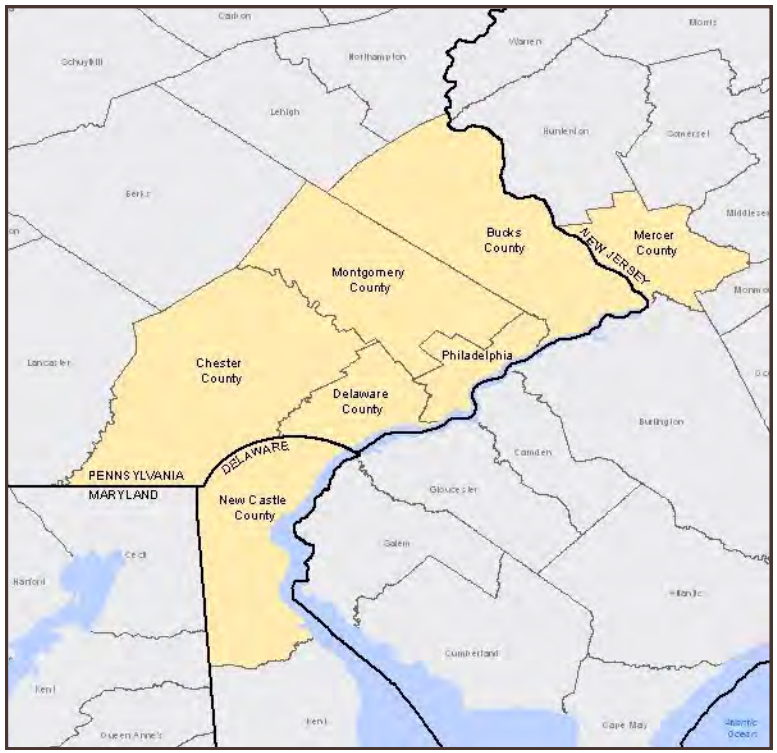
Trolley Tunnel Track

Introduction to SEPTA

SEPTA is the nation's sixth-largest public transit agency and the primary public transit provider in the greater Philadelphia region. SEPTA was created by the Pennsylvania state legislature in 1964 and is an instrumentality of the Commonwealth of Pennsylvania. SEPTA's multimodal network serves a 2,200 square-mile region with a population exceeding four million. The SEPTA service area includes the five counties of southeastern Pennsylvania – Bucks, Chester, Delaware, Montgomery, and the City of Philadelphia – and also extends to Trenton and West Trenton in New Jersey, and Wilmington and Newark in Delaware.

SEPTA operates the following services:

- 118 bus routes
- 13 Regional Rail lines
- 8 Trolley lines
- Broad Street Line and the Market-Frankford Line (subway/elevated)
- Norristown High Speed Line (an interurban heavy rail line)
- 3 Trackless Trolley routes
- Customized Community Transportation (CCT), demand response services for seniors and individuals with disabilities
- Four small bus circulator and shuttle services



Service / Mode	Ridership	Revenue Vehicles
Bus	158,525,100	1,380
Regional Rail	37,413,300	404
Trolley	28,500,600	159
Subway/Elevated	94,432,000	343
Norristown High Speed Line	3,429,300	26
Trackless Trolley	5,974,500	38
Demand Response	1,844,500	457
Total	**330,119,300**	**2,807**

Source: FY 2015 SEPTA Operating Statistics

In FY 2015, the Authority provided more than **330 million** passenger trips, with average weekday ridership of approximately **1.10 million** trips. SEPTA's Regional Rail ridership has **increased by more than 50 percent** over the last 17 years, from 24.8 million in 1998 to a **record-setting 37.4 million** in FY 2015. System-wide, ridership has remained near quarter-century highs.

SEPTA Regional Rail and Rail Transit Map

Recent Achievements

SEPTA was recently named one of the nation's top employers by **Forbes Magazine**, winning the No. 33 spot in a ranking of **500 Best U.S. Employers**.

SEPTA provided transportation for the **World Meeting of Families** and **Pope Francis' visit**, in partnership with the Archdiocese of Philadelphia and the City of Philadelphia. SEPTA provided approximately 750,000 rides on Regional Rail, the Broad Street Line and the Market-Frankford Line during the weekend.

SEPTA's renovation of Wayne Junction Station received the **2015 Grand Jury Award** from the **Preservation Alliance for Greater Philadelphia**.

On November 15, 2015, SEPTA opened its first new **Regional Rail station** in nearly 20 years. The new 9th Street Station on the Lansdale/Doylestown line is an innovative **public-private partnership** between SEPTA, Lansdale Borough, Lansdale Parking Authority and Stoltz Real Estate Partners working together to enhance Regional Rail service access for those who live and work in Montgomery County.

SEPTA employees donated and distributed **10,000 new toys, games, and bicycles** for deserving children in the Greater Philadelphia region during the annual Yule Toy drive.

SEPTA received the 2016 **Governor's Award for Environmental Excellence** for its Griscom Wayside Energy Storage System, which captures and recycles energy created by braking trains on the Market-Frankford Line, reducing energy consumption and also generating revenue.

SEPTA is preparing to host the **2016 Democratic National Convention**, which will be held in Philadelphia in July of 2016.

Strategic Business Plan

As part of its Five-Year Strategic Business Plan, SEPTA establishes vision, mission, core values, strategies, and key performance indicators to measure progress toward business objectives. The strategic planning process is a management tool that unifies and guides SEPTA's other major planning processes, including the Operating and Capital Budgets and the Annual Service Plan. The Strategic Business Plan for FY 2015-2019 uses eight corporate objectives to align these plans:

- ☑ Safety & Security
- ☑ The Customer Experience
- ☑ Sustainability
- ☑ Ridership Growth
- ☑ Emerging Technologies
- ☑ Rebuilding the System
- ☑ Human Capital Development
- ☑ Business Partnerships

SEPTA employs a balanced scorecard approach to measure quantifiable progress. "Key Performance Indicators" reports are updated monthly and are available at: http://www.septa.org/strategic-plan/reports.html.

A Commitment to Sustainability · SEPTA has achieved "Gold" level recognition for its commitment to sustainability from the American Public Transportation Association (APTA). SEPTA is one of only 17 transit agencies in North America that have received that designation.

Sustainability Program Plan

A key programmatic element of SEPTA's Strategic Business Plan is "SEP-TAINABLE," which outlines the Authority's triple bottom line approach to sustainability: accounting for environmental, social and economic organizational needs and regional opportunities. The program sets 12 sustainability goals with specific, measurable performance targets for each goal. SEPTA releases annual reports tracking progress toward these goals. The program plan and annual reports are available at http://www.septa.org/sustain. Examples of goals, performance indicators and results are shown in the table below.

SEP-TAINABLE Sustainability Plan Goals *(Selection)*

Focus Area	Example Goal	Performance Indicator	Latest Results
Environmental	Reduce waste and increase recycling rates	Recycling rate (% Diverted from landfill)	Recycled 17% of municipal waste in FY 2015; progress towards a 20% goal system wide.
Social	Improve access to local food via transit	Farmers markets on SEPTA property	In 2015, four markets were hosted on SEPTA property, exceeding performance target of three markets.
Economic	Achieve recommended funding levels	Increase capital funding to address critical infrastructure improvement needs	The Fixing America's Surface Transportation (FAST) Act was passed in 2015, providing a stable and growing source of federal funding for State of Good Repair needs.

Transit Asset Management

SEPTA is implementing a new Transit Asset Management (TAM) Program, to be fully functional in 2016. The TAM Program will guide SEPTA's capital investments, and will allow the Authority to produce State of Good Repair performance indicators in accordance with new federal requirements. A new suite of software will help SEPTA maintain comprehensive asset inventories and maintenance information for rolling stock and fixed assets such as bridges, stations, and rail. Initiatives currently underway include:

Asset Maintenance Management System · Implementation of an infrastructure maintenance management system to maintain inventory; track inspection dates; and schedule preventive maintenance, for SEPTA's infrastructure and associated assets.

State of Good Repair Database · Development of a capital planning and decision-making tool that will evaluate the Authority's ability to achieve a state of good repair based on available funding.

Vehicle Maintenance Information System (VMIS) · Upgrade of software used to manage and maintain SEPTA's revenue vehicles, including buses, Customized Community Transportation (CCT) vehicles, rail cars, and utility vehicles.

One of SEPTA's strategic business goals is "Rebuilding the System." The Authority continues to prioritize the replacement and renewal of infrastructure and vehicles, such as substations, bridges, stations, maintenance facilities, and rail cars, in order to bring the system to a state of good repair. State of good repair projects require attaining a balance between operational impacts and other strategic business initiatives.

Catenary Replacement

40-Foot Hybrid Bus

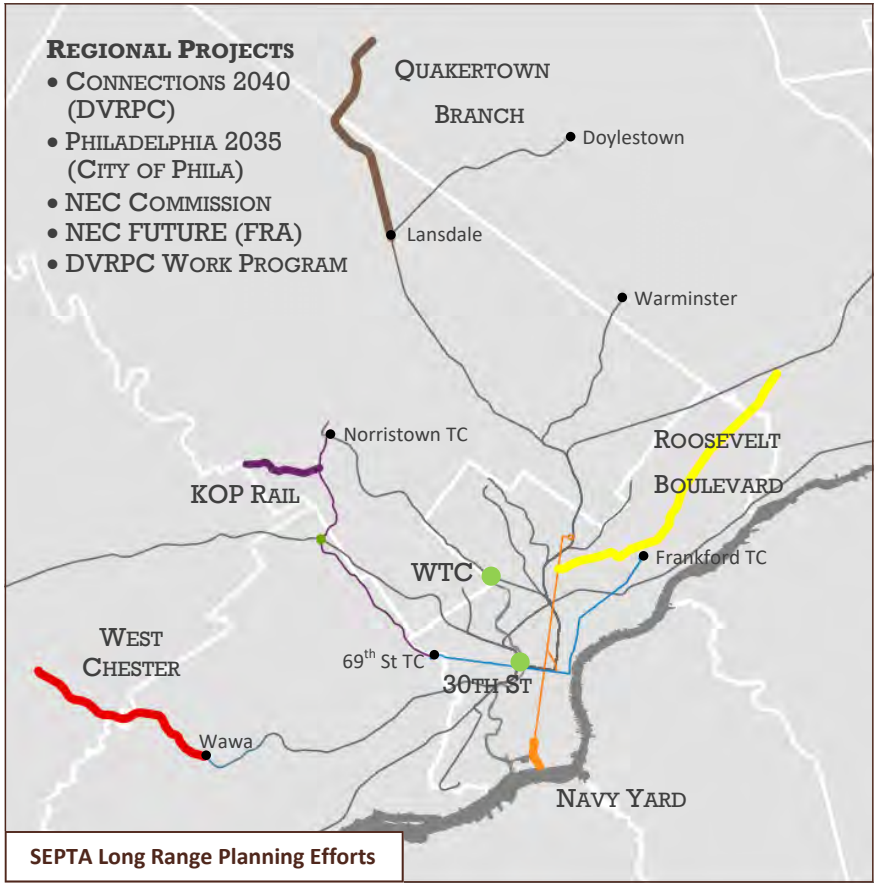
Long Range Planning

SEPTA plays a key role in a wide variety of transportation planning efforts within the region, ranging from involvement in DVRPC's Connections 2040 Long Range Transportation Plan, to review and implementation of Philadelphia 2035 and County Plans, to local station area planning projects with Municipalities within our service area. These planning efforts help to identify potential future transportation needs as well as inform the SEPTA capital planning process of recommended future investments.

Although SEPTA will remain focused for some time to come on reducing our backlog of state of good repair projects, we are able to advance planning efforts for a small number of potential future system expansion projects. These projects would allow SEPTA to see the potential for new riders to the system, as well as provide more efficient and reliable service to existing customers. SEPTA is currently involved in planning work for several of these potential future expansions: an extension of the Norristown High Speed Line to King of Prussia (the King of Prussia Rail Project), an extension of the Broad Street Line to the Philadelphia Navy Yard, and restoration of rail service on the Bethlehem Branch from Lansdale to Perkasie.

SEPTA also participates in complex and large scale planning efforts led by area stakeholders, including implementation and review of the Philadelphia 2035 plan, Amtrak Northeast Corridor Planning, and participation in the DVRPC work program and associated studies.

Many of these long term planning efforts are identified on the adjacent map. For additional details on these projects as well as SEPTA's framework for a Long Range Plan, please refer to the following page and Appendix B.



SEPTA Long Range Planning Efforts

Highlighted Expansion Projects

King of Prussia Rail

The King of Prussia Rail Project is a Draft Environmental Impact Statement (DEIS) and Alternatives Analysis evaluating different alignments for an extension of the Norristown High Speed Line to King of Prussia. With almost 60,000 employees, King of Prussia is the largest employment center outside of the City of Philadelphia, and as a result of key assets like the King of Prussia Mall and the Valley Forge National Historical Park, serves as a key destination for tourism within Montgomery County. The rail extension would offer improved regional transit connections to King of Prussia from communities along the existing NHSL, Norristown, and Philadelphia; improve connectivity between major destinations; and better serve existing and new transit riders. The DEIS will also assess each alternative's impact to the natural, cultural and social environment, and address ways to minimize any impacts that cannot be avoided. Funding for planning and some design work is being provided under an existing FTA grant.

Project Milestones

- Recommendation of a Locally Preferred Alternative (LPA): March 2016
- Release of Draft Environmental Impact Statement: Anticipated December 2016
- Adoption of the Locally Preferred Alternative: Anticipated early 2017

Additional project information can be found at www.kingofprussiarail.com

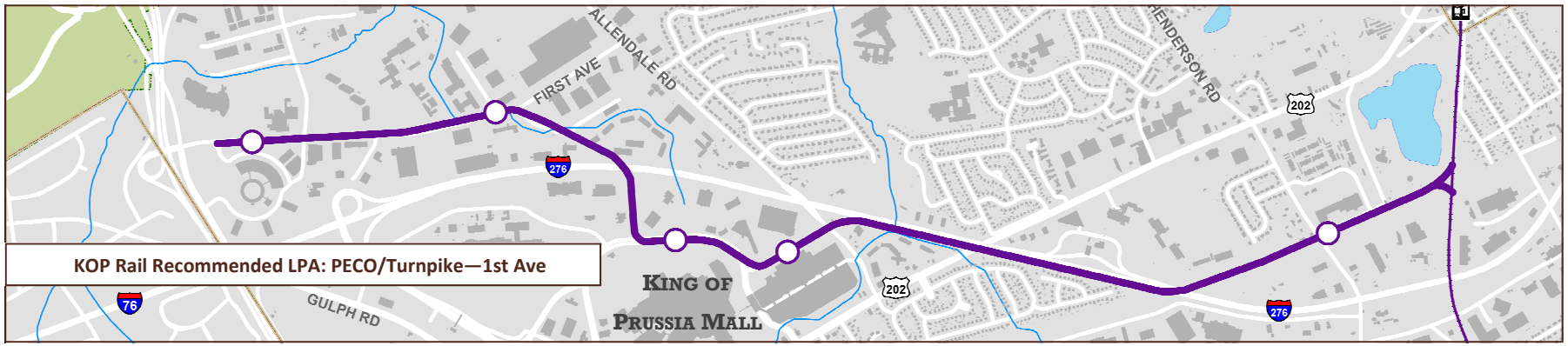
Broad Street Line Extension to the Navy Yard

The Broad Street Line Extension to the Navy Yard is a Phase 2 feasibility analysis to explore how the Broad Street Line could be extended from its current terminus at AT&T station into the Philadelphia Navy Yard. The number of employees at the Navy Yard, currently at 12,000, is rapidly growing and could increase to over 36,000 employees at full build out. This study will build upon previous planning work to update potential cost and ridership information, as well as assess the overall feasibility of a subway extension to the area.

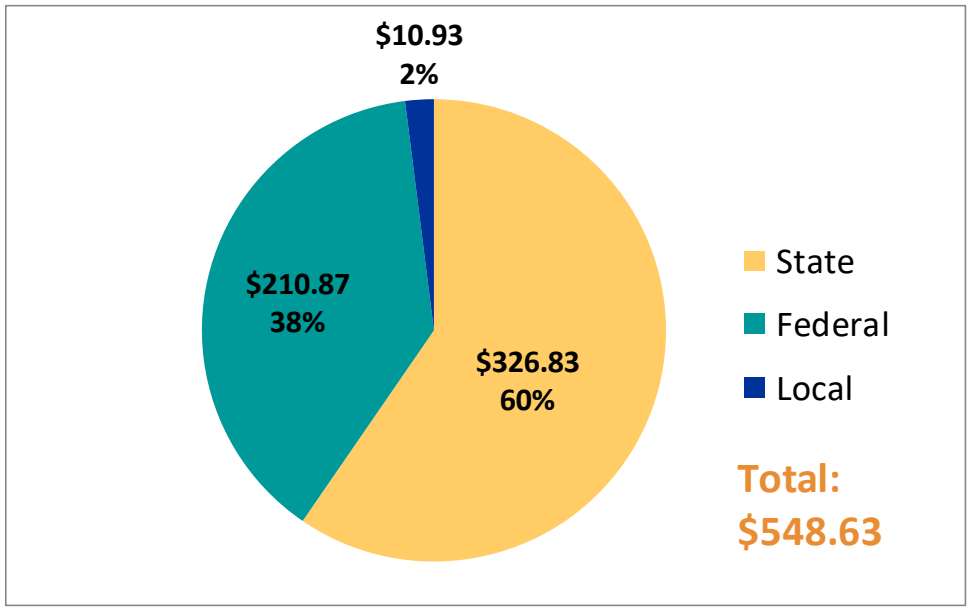
Project Milestones

- Alternative Identification: March 2016
- Ridership and Cost Estimates updated: Anticipated Fall 2016
- Phase 2 Feasibility Report Completion: Anticipated Winter 2016 /2017

Additional project information can be found at www.bslxnavyyard.com



FY 2017 Capital Budget: Funds by Source ($M)



State Transportation Funding: The Passage of Act 89 · Act 44 of 2007 established the Public Transportation Trust Fund, which restructured state funding for public transit and replaced the previous General Fund sources with dedicated sources. However, in 2010, the Pennsylvania Turnpike Commission was unable to obtain federal approval to begin tolling Interstate 80. As a result, Act 44 funds were significantly reduced. Between FY 2011 and FY 2014, SEPTA's capital program shrunk to about $300 million annually, the lowest level since 1997. The state legislature recognized the need for continued investment in transportation infrastructure. Following on the recommendations of the Governor's Transportation Funding Advisory Commission, lawmakers crafted a comprehensive transportation funding bill to provide long-term, dedicated funding for public transit as well as roads, bridges and multimodal transportation. State Act 89 of 2013 (House Bill 1060) was signed into law on November 25, 2013.

State Funds: $326.83 Million

Act 89 of 2013 provided a comprehensive transportation funding solution for the Commonwealth of Pennsylvania. The funding is indexed to inflation and has no legislative sunset. New revenues for transportation were generated through uncapping the Oil Company Franchise Tax (OCFT), adjusting various fees for inflation, and surcharges on traffic tickets. This long-term, dedicated source of state funding for transit means that SEPTA can begin to address its State of Good Repair backlog, resulting from years of capital funding shortfalls, while modernizing equipment and laying the groundwork for future improvements. Following the passage of Act 89, SEPTA presented the "Rebuilding for the Future" initiative in its FY 2015 capital program.

SEPTA's FY 2017 Capital Budget includes **$326.83 million** in state funds. This is level with the amount received in FY 2016.

SEPTA receives state capital funds primarily via Section 1514, the Asset Improvement Program. Sources of funding for Section 1514 are generated by various sources: proceeds of capital bonds; tire, vehicle lease and vehicle rental fees; traffic violation fines; motor license fund fees; and turnpike transfer funds, which will eventually be replaced with sales and use tax revenues. SEPTA receives 69.4 percent of the statewide capital funds allocated to transit authorities.

The Section 1514 program supports up to 96.775 percent of the total cost of capital projects. The remaining 3.225 percent is matched by Bucks, Chester, Delaware and Montgomery Counties and the City of Philadelphia. SEPTA also uses state transit funds to match federal grants, with the state share being 19.355 percent of the total project cost when used in this manner. The remaining 0.645 percent is matched by the four regional counties and City of Philadelphia.

Federal Funds: $210.87 Million

On December 4, 2015, President Obama signed into law the Fixing America's Surface Transportation (FAST) Act. The FAST Act is the first passage of a long-term surface transportation authorization since 2005. Over its five year lifespan, the FAST Act authorizes $305 billion for surface transportation funding, including $61 billion dedicated for public transportation. This creates a steady and predictable funding stream that also modestly increases national public transportation investment. The FAST Act maintains most program structures established in the Moving Ahead for Progress in the 21st Century (MAP-21) Act of 2012. Funding increases are targeted toward improving state of good repair and the bus program.

SEPTA's FY 2017 Capital Budget includes an estimated $**210.87 million** in federal funds. Federal funding sources and FY 2017 estimates are shown in the adjacent table.

Most of SEPTA's federal funding is provided by grants from the Federal Transit Administration (FTA) via the formula funding programs. SEPTA also receives federal highway funds that PennDOT "flexes" (i.e., transfers) to transit agencies in the Commonwealth. SEPTA typically uses flex funds for bus replacements. The FY 2017 budget also includes $2.5 million in projected Transit Security Grant Program (TSGP) funds allocated through competitive grants administered by the Federal Emergency Management Agency (FEMA).

Federal funds typically support 80 percent of the total cost of a capital project; the remaining 20 percent local match is provided by the Commonwealth of Pennsylvania, the City of Philadelphia, and Bucks, Chester, Delaware and Montgomery Counties.

The Authority applies for competitive federal grants when available, and SEPTA has received a variety of grant awards to support capital projects. The FAST Act authorized new competitive grant programs, such as grants under Section 5339(b) to assist in purchasing or rehabilitating buses and bus-related facilities, and also authorized funds for Low or No Emission (LoNo) Grants under Section 5339(c) to fund the purchase of low and no emission buses.

FY 2017 Budget: Federal Funding Estimates

Program	Description	Amount (Millions)
FTA Section 5307	Urbanized Area Formula Program. Funds transit capital projects. Allocations based on population, density, operating expenses, revenue miles and route miles.	$62.99
FTA Section 5340	Growing States and High Density States Formula Program. Allocations based on population forecasts and population density. SEPTA receives Growing States program funding.	$3.14
FTA Section 5337	State of Good Repair Program. Funds High Intensity Fixed Guideway (rail) and High Intensity Motorbus capital projects. Allocations based on vehicle revenue miles and route miles.	$117.90
FTA Section 5339	Bus and Bus Facilities Formula Program. Funds capital projects to replace, rehabilitate or purchase buses and related facilities. Allocations based on population and service factors after providing a minimum amount per state.	$7.26
Highway Flex	Federal highway program funds that PennDOT provides to state transit agencies for capital improvement projects. Based on the Governor's commitment, $25 million per year is flexed annually to transit operators.	$17.08
Transit Security Grant Program	Competitive grant program administered by Federal Emergency Management Agency (FEMA). Provides funds for anti-terrorism, safety and security improvements, and operational activities such as directed patrols.	$2.50
Total Federal		**$210.87**

Local Funds: $10.93 Million

SEPTA's FY 2017 Capital Budget includes **$10.93 million** in local matching funds. The required local match for federal and state grant funds is provided by Bucks, Chester, Delaware and Montgomery Counties and the City of Philadelphia. SEPTA requests matching funds from the counties along with its annual operating budget request; capital funds required for the City of Philadelphia's local share are requested as part of the City's capital budget process.

69th Street Transportation Center Parking Garage

Joint Development and Public-Private Partnerships

Joint development refers to public transportation projects that integrally relate to, and are often co-located with, commercial, residential, mixed-use, or other non-transit development. Joint development may include partnerships for public or private development associated with any transit mode that is being improved through new construction, renovation, or extension.

Public–Private Partnerships (P3s) are contractual agreements between a public agency and a private entity that allow for greater private participation in the delivery of transportation projects. In P3s, the private sector assumes more risk in exchange for the opportunity to earn a financial return, while the public sponsor benefits from access to private capital. P3s require a revenue stream that can be used to repay the project financing. Where allowable, P3s can improve project feasibility, shorten project schedules and improve the quality of the finished project.

Federal and state agencies are working to pave the way for Joint Development and P3s in the transportation industry. In 2014, the FTA published new guidance on utilizing FTA funds or FTA-funded real property in Joint Development projects. In 2012, Pennsylvania lawmakers passed legislation approving the use of public-private partnerships for transportation projects.

SEPTA is releasing a Request for Proposals (RFP) for a Joint Development for the 69th Street Transportation Center Parking Garage. SEPTA is seeking to partner with a private developer that will finance, design, build, operate and maintain the parking garage. The developer will also construct a shell for the bus terminal, and will provide accessible pathways between the parking garage and bus terminal, and between the parking garage and the 69th Street Terminal. SEPTA will fit out the bus terminal and pedestrian connections including the provision of any elevators/escalators, curb cuts and tactile edges.

SEPTA's Board adopted a Finding of Special Opportunity approving the use of a Request for Proposal for the joint development of SEPTA-owned property adjacent to the Frankford Transportation Center (FTC). In reviewing developer proposals, SEPTA will be able to consider how the property will ultimately be used, taking into account community interest in a food market as well as operational needs.

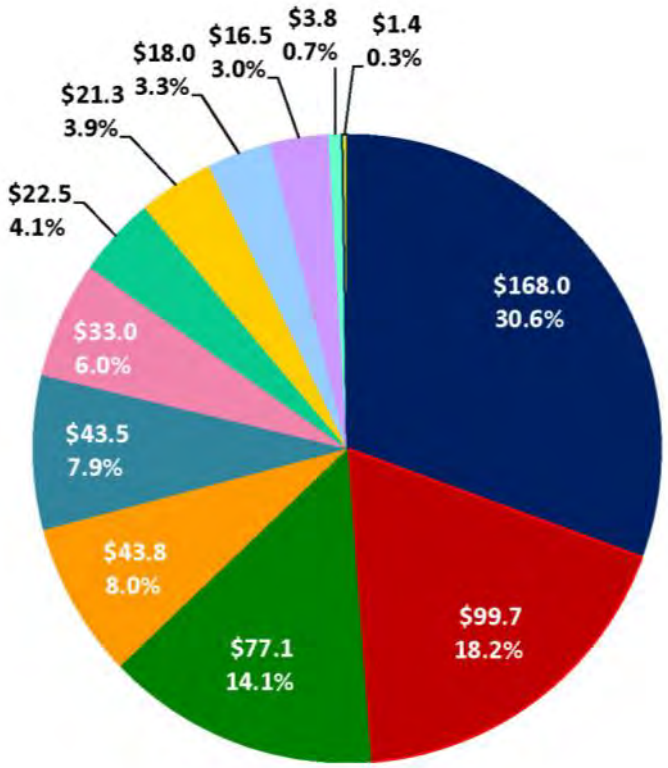
In addition, SEPTA is partnering with Constellation and Viridity Energy on an 8.75 megawatt battery storage network, to be deployed at seven SEPTA substations. The network is designed to use stored energy to power trains as they accelerate from stations, and can provide emergency generation for trains in the event of a power outage.

FY 2017 Capital Budget - Summary

SEPTA's FY 2017 Capital Budget totals **$548.6 million.** Projected FY 2017 funds are allocated among projects that will advance strategic objectives, bring assets to a state of good repair, meet the Authority's financial obligations, and implement system improvements to enhance transit service. Capital investments are focused on the following areas:

- **Bridge Program ($33.0 M)**: Includes Regional Rail viaducts and stone arch bridges, and a bridge on the Norristown High Speed Line.
- **Communications, Signal Systems and Technology Improvements ($18.0 M)**: Includes improvements to signals, interlockings, dispatching and operations management systems and real-time information.
- **Financial Obligations ($99.7 M):** Includes SEPTA's Amtrak trackage lease, other capital asset leases and debt service payments.
- **Infrastructure Safety Renewal Program ($43.5 M):** Includes track replacement; station renewal; rehabilitation of signals, communications equipment, traction and power systems; and rehabilitation of maintenance facilities.
- **Maintenance/Transportation Shops, Offices and Roofs ($22.5 M):** Rehabilitation of bus and rail maintenance shops, facilities maintenance shops, and offices to bring infrastructure and equipment to a state of good repair. Includes expansion of Frazer Yard to accommodate planned additions to the Regional Rail fleet.
- **Safety & Security ($16.5 M):** Includes safety and security measures for vehicles and facilities, and interoperable communications. Also includes projects competitively funded through the U.S. Department of Homeland Security (DHS) to provide protection from terrorism, major disasters and other emergencies.
- **SEPTA Key ($77.1 M):** Includes modernization of SEPTA's fare payment system and companion projects.
- **Service Restoration ($1.4 M):** Elwyn to Wawa Rail Service Restoration.
- **Stations, Loops and Parking Improvements ($43.8 M):** Reconstruction or rehabilitation of SEPTA stations and parking expansions and improvements with a focus on accessibility.
- **Substations and Power Improvements ($21.3 M):** Modernization of SEPTA's railroad and transit substations, originally built in the 1920s and 1930s, and catenary replacement.
- **Track and Right-of-Way Improvements ($3.8 M):** To return rail infrastructure to a state of good repair. Includes tie replacement and continuous welded rail (CWR).
- **Vehicle Acquisitions and Overhauls ($168.0 M):** Replacing vehicles that have exceeded their useful life, acquisition of additional locomotives and utility vehicles, and optimizing the performance of the existing fleet through targeted overhaul campaigns.

Projects are described in more detail in the Program Descriptions.



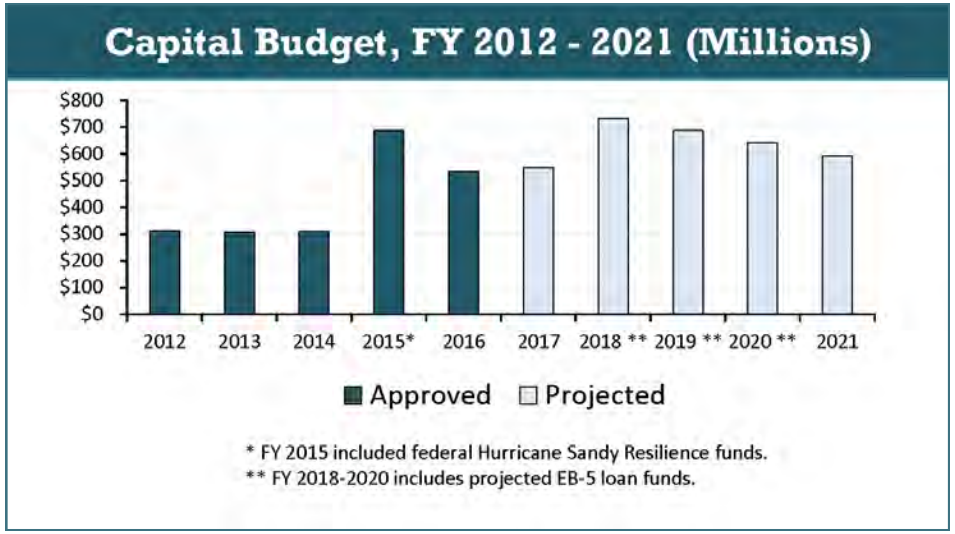
FUNDING PROJECTIONS AND ASSUMPTIONS

The FAST Act authorizes federal funding for surface transportation programs through Federal Fiscal Year 2020. To reflect the authorized growth of programs funded from the Mass Transit Account, SEPTA's funding projections assume the Authority's federal formula funding will grow approximately 6.5 percent between Fiscal Years 2017 and 2020, with level funding thereafter. The FAST Act does not include a long-term solution for ensuring solvency of the Federal Highway Trust Fund, which supports both highway and transit programs. However, the bill does provide predictability in the short term.

State funding levels are based on current financial guidance from PennDOT. For FY 2017, funding provided under Act 89 is forecasted at the same level as FY 2016 ($326.8 million). Starting in FY 2023, funding for the Public Transportation Trust Fund currently provided by the Turnpike Commission will be replaced by new, bondable revenue sources, including sales and use tax.

The FY 2017-2028 Capital Program includes anticipated capital financing pursuant to the Employment Based Immigration - 5th preference (EB-5) program administered by United States Citizenship and Immigration Services (USCIS). The loan will be made available to SEPTA over a period of several years and may provide up to $300 million to partially fund certain capital projects.

SEPTA's FY 2017 Capital Budget and FY 2017-2028 Capital Program totals $7.3 billion and is fiscally constrained, so that the program of projects reflects anticipated funding levels. In order to advance additional projects, additional funding must be secured through competitive grants or local sources, or through the use of other capital financing tools to distribute project costs over a longer period of time.



Route 102 Street Track

Highlighted Accomplishments

SEPTA has made significant progress in advancing the capital program since the passage of Act 89 in November 2013. For the period January 1, 2014 through May 31, 2016, SEPTA issued Notices to Proceed for 87 major third-party construction contracts. Examples of recently completed capital projects include:

- 9th Street Station (Lansdale)
- 23rd & Venango and 35th & Allegheny Bus Loop Improvements
- 69th Street Transportation Center West Terminal
- Bridge 6.48 over Whiskey Run Replacement
- Chestnut Hill West Bridge 0.35 Rehabilitation
- Clifton Substation Overhaul
- North Wales Station Parking Expansion
- Race-Vine Station Accessibility Improvements
- Roof Replacements at Callowhill Garage, Fern Rock Carhouse/Washer, and Roberts Carhouse/Car Wash
- Rt. 102 Woodlawn Avenue Street Track Renewal
- Secane Station Parking Expansion
- Stone Arch Bridge Rehabilitation - Bridges 16.88, 13.10 and 22.93
- Temple Station Roof Replacement
- Wayne Junction Station Improvements
- Wayside Energy Storage at Griscom Substation
- Woodland Rail Shop Fire Suppression Upgrade

Project status updates and photos for the Rebuilding the System program are available online at http://www.SEPTA.org/rebuilding.

9th Street Station (Lansdale)

69th Street Transportation Center West Terminal

23rd & Venango Bus Loop

Wayne Junction Station Improvements

FY 2017 CAPITAL BUDGET AND FY 2017-2028 CAPITAL PROGRAM

Capital Program and Project Descriptions

FY 2017 CAPITAL BUDGET AND FY 2017-2028 CAPITAL PROGRAM

Capital Programs / Financial Obligations	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022-2028	12-Year Program Total	Beyond FY 2028	Total Budget
						$Millions				
Capital Programs										
Bridge Program	$43.06	$33.00	$40.20	$18.60	$15.50	$15.80	$109.99	$233.09	$25.71	$301.86
Communications, Signal Systems and Technology Improvements	$24.31	$18.00	$30.54	$27.00	$27.00	$25.50	$143.68	$271.72	$34.20	$330.23
Infrastructure Safety Renewal Program	$0.00	$43.50	$44.50	$45.50	$46.50	$47.50	$360.50	$588.00	$0.00	$588.00
Maintenance/Transportation Shops and Offices	$23.03	$22.49	$42.93	$56.45	$61.52	$34.35	$151.98	$369.72	$19.21	$411.96
Safety and Security Improvements	$6.83	$16.50	$17.39	$18.09	$17.51	$14.91	$51.58	$135.98	$0.00	$142.81
SEPTA Key	$69.99	$77.15	$68.76	$52.00	$0.00	$0.00	$0.00	$197.91	$0.00	$267.90
Service Restorations	$12.65	$1.40	$36.99	$36.00	$47.02	$16.54	$0.00	$137.95	$0.00	$150.60
Stations, Loops and Parking Improvements	$184.04	$43.80	$86.12	$69.65	$77.68	$56.94	$337.61	$671.80	$234.89	$1,090.73
Substations and Power Improvements	$32.10	$21.27	$32.35	$29.83	$35.10	$35.32	$166.37	$320.24	$67.48	$419.82
Track and Right-of-Way Improvements	$9.85	$3.79	$4.14	$4.20	$4.70	$4.60	$33.41	$54.84	$41.75	$106.44
Vehicle Acquisitions and Overhauls	$88.90	$168.00	$227.35	$221.63	$206.23	$234.28	$2,013.77	$3,071.26	$977.82	$4,137.98
Subtotal Capital Programs	**$494.76**	**$448.90**	**$631.27**	**$578.95**	**$538.76**	**$485.74**	**$3,368.89**	**$6,052.51**	**$1,401.06**	**$7,948.33**
Financial Obligations										
Capital Leases	$0.00	$48.02	$49.45	$54.30	$55.34	$56.45	$428.25	$691.81	$0.00	$691.81
Debt Service	$0.00	$51.71	$51.62	$53.58	$47.30	$49.21	$342.52	$595.94	$288.23	$884.17
Total Capital Budget	**$494.76**	**$548.63**	**$732.34**	**$686.83**	**$641.40**	**$591.40**	**$4,139.66**	**$7,340.26**	**$1,689.29**	**$9,524.31**

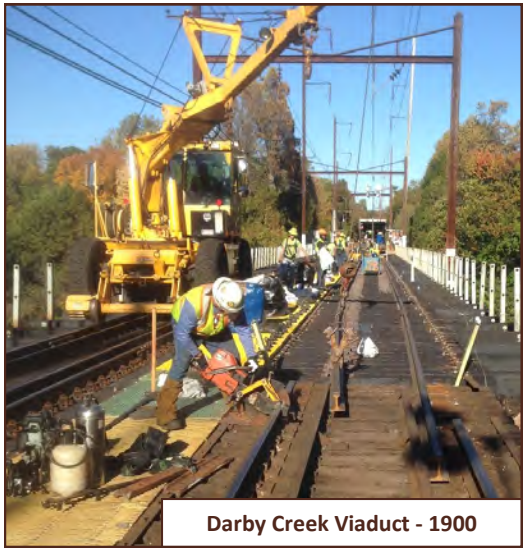
BRIDGE PROGRAM

The SEPTA system includes more than 350 bridges. The average age is in excess of 85 years, with 155 bridges over 100 years old. The majority of structures were constructed in the early 1900s. This program will restore SEPTA's bridges to a state of good repair. Bridges will be repaired or replaced based on their condition, and new bridges will be constructed where required. Rehabilitation/replacement of bridges on rail lines and SEPTA right-of-ways will include culverts, pedestrian bridges and associated bridge support structures.

Stone Arch Bridge 12.12 - 1854

Bridge Program - Program Elements	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022 - 2028	12-Year Program Total	Beyond FY 2028	Total Budget
	$Millions									
Bridge Program	$43.06	$33.00	$40.20	$18.60	$15.50	$15.80	$109.99	$233.09	$25.71	$301.86
TOTAL	$43.06	$33.00	$40.20	$18.60	$15.50	$15.80	$109.99	$233.09	$25.71	$301.86

Crum Creek Viaduct - 1895



Darby Creek Viaduct - 1900

NHSL Bridge 0.15 - 1906

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Railroad Bridge Projects (FY 2017 - 2021)				
Crum Creek Viaduct				
Replacement of the Crum Creek viaduct on the Media/Elwyn Regional Rail Line, which was constructed circa 1895. The viaduct spans 925 feet, and at its greatest height, is over 100 feet above grade.	$89.86 M	Design Complete Construction 2015 - 2017	Delaware	Delaware Philadelphia
Media/Elwyn Line Viaduct Improvements				
Replacement of bridge timbers, painting, superstructure, substructure steel repairs and foundation reinforcement on three viaducts on the Media/Elwyn Regional Rail Line, including: • Cobbs Creek Viaduct (Mile Post 4.79), 377 foot span. Built 1891. • Darby Creek Viaduct (Mile Post 7.11), 339 foot span. Built 1900. • Ridley Creek Viaduct (Mile Post 14.41), 641 foot span. Built 1896.	$35.00 M	Design Complete Construction 2014 - 2016	Delaware Philadelphia	Delaware Philadelphia
Stone Arch Bridge Program - Phase 2				
Rehabilitation of the following eight (8) Stone Arch Bridges on SEPTA's Regional Railroad: • Lansdale/Doylestown Line Mile Post 4.87. Built 1915. • Fox Chase Line Mile Post 6.87. Built 1892. • Lansdale/Doylestown Line Mile Post 18.91. Built 1903. • Media/Elwyn Line Mile Post 12.68. Built 1854. • West Trenton Line Mile Post 13.70. Built 1912. • West Trenton Line Mile Post 15.95. Built 1876. • West Trenton Line Mile Post 18.52. Built 1948. • West Trenton Line Mile Post 22.65. Built 1876.	$10.00 M	Design 2016 - 2017 Construction 2017 - 2020	Bucks Delaware Montgomery Philadelphia	Bucks Chester Delaware Montgomery Philadelphia

BRIDGE PROGRAM

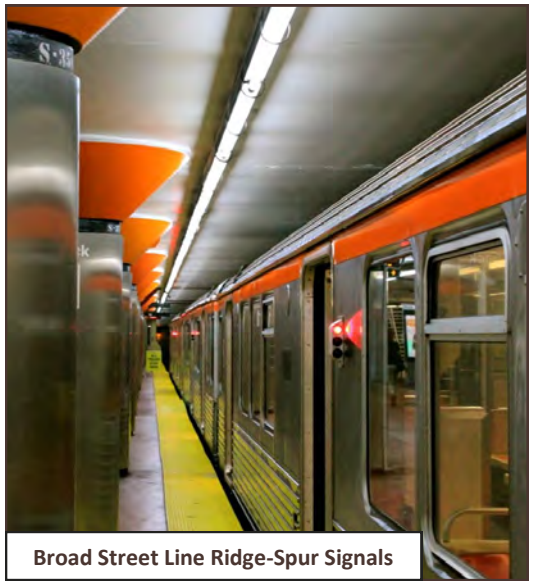
Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Railroad Bridge Projects (FY 2022-2028)				
Chestnut Hill East Line Bridge Rehab Program				
Rehabilitation of five bridges on the Chestnut Hill East Regional Rail Line located at Mile Post 5.04, 5.72, 7.63, 8.90 and 9.59.	$30.00 M	2022 - 2028 Project	Philadelphia	Philadelphia
Chestnut Hill West Bridge Rehab Program				
Rehabilitation of seven bridges on the Chestnut Hill West Regional Rail Line located at Mile Post 0.06, 0.83, 1.17, 1.26, 2.98, 4.42 and 5.67.	$35.00 M	2022 - 2028 Project	Philadelphia	Philadelphia
Mainline–Schuylkill Bridges (30th St. to Suburban Station)				
Rehabilitation of seven bridges between 30th Street Station and Suburban Station located at Mile Post 0.49, 0.58, 0.61, 0.64, 0.68, 0.72 and 0.76. These bridges were built in 1929.	$56.00 M	2022 - 2028 Project	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Transit Bridge Projects (FY 2017 - 2021)				
NHSL Bridge 0.15 over 69th St. Yard El Tracks				
Replacement or rehabilitation of existing four (4) span steel structure of Bridge 0.15 on the Norristown High Speed Line. This bridge was built in 1906.	$15.50 M	Design 2016 - 2018 Construction 2018 - 2020	Delaware	Delaware Montgomery
NHSL Viaduct over Schuylkill River				
Rehabilitation of the viaduct at Mile Post 12.81 on the Norristown High Speed Line, including steel, concrete and bearing repairs and painting. The viaduct was constructed in 1911 and is 3,165 feet long. The timbers on the viaduct were replaced in 2013.	$30.50 M	Design 2021 - 2022 Construction 2022 - 2025	Montgomery	Delaware Montgomery

COMMUNICATIONS, SIGNAL SYSTEMS AND TECHNOLOGY IMPROVEMENTS

This program provides for improvements to SEPTA's communications systems, signal systems, and information technology infrastructure. Projects will upgrade hardware and software, replace equipment that has reached or exceeded its useful life, and bring systems to a state of good repair. As part of its Capital Program, SEPTA will rehabilitate various grade crossings and interlockings, upgrade the Computer Aided Radio Dispatch (CARD) system, and upgrade real-time arrival information for customers. Rail signal modernization projects will improve operational reliability and enhance service quality. The annual Information Technology program provides replacement and upgrades of the Authority's computer hardware, software and network equipment.

Communications, Signal Systems and Technology Improvements - Program Elements	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022-2028	12-Year Program Total	Beyond FY 2028	Total Budget
	$Millions									
Communications & Signal Improvements	$24.31	$8.00	$22.44	$22.00	$22.00	$20.50	$108.68	$203.62	$34.20	$262.13
Technology Improvements	$0.00	$10.00	$8.10	$5.00	$5.00	$5.00	$35.00	$68.10	$0.00	$68.10
TOTAL	$24.31	$18.00	$30.54	$27.00	$27.00	$25.50	$143.68	$271.72	$34.20	$330.23

Real-Time Passenger Information


Broad Street Line Ridge-Spur Signals

Route 101/102 Positive Train Control

COMMUNICATIONS, SIGNAL SYSTEMS AND TECHNOLOGY IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Communications & Signal Improvements—Railroad Projects (FY 2017-2021)				
30th to Arsenal Catenary, Signals and ROW Improvements				
Improvements to Arsenal Interlocking (near University City Station), and the addition of a new interlocking to support operation of the Airport Line through Amtrak's Phil Interlocking. Includes installation of new track special work, overhead catenary, signals and switch and lock mechanisms, as well as the addition of new Positive Train Control (PTC) systems. The existing signal block layout will be modified to ensure safe train operations and braking.	$41.80 M	Design 2014 - 2016 Construction 2017 - 2018	Philadelphia	Bucks Delaware Montgomery Philadelphia Delaware (state) New Jersey
Media/Elwyn Automatic Train Control (ATC) Upgrade				
This project will retire the existing and unreliable wayside signals, AC track circuits and traffic signal cabling from Arsenal to Elwyn Interlocking on the Media/Elwyn Line. New pre-wired wayside cases outfitted with digital track circuits will be procured and installed at each existing wayside block location, the existing wayside signal equipment retired and Cab No-Wayside (NORAC Rule 562) instituted.	$3.65 M	Design Complete Construction 2015 - 2018	Delaware Philadelphia	Delaware Philadelphia
York Interlocking				
Design and installation of a new universal interlocking at York, to be located southwest of Noble Station on the West Trenton Regional Rail Line. Includes installation of new track special work, overhead catenary, signals and switch and lock mechanisms, as well as the addition of new Positive Train Control (PTC) systems. The existing signal block layout will be modified to ensure safe train operations and braking.	$7.00 M	Design 2018 - 2019 Construction 2019 - 2022	Montgomery	Bucks Montgomery
Communications & Signal Improvements—Railroad Projects (FY 2022 - 2028)				
Beth Interlocking / Signal Improvements				
Installation of a new universal interlocking at Beth, to be located south of Bethayres Station on the West Trenton Regional Rail Line.	$7.00 M	2022 - 2028 Project	Bucks	Bucks Montgomery

COMMUNICATIONS, SIGNAL SYSTEMS AND TECHNOLOGY IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Hunt/Wayne Interlocking				
Improvements to the Hunt/Wayne Interlocking on SEPTA's Regional Rail Main Line. Work includes: installation of a new high-speed crossover between No. 2 and No. 3 tracks; installation of an independent microprocessor-based interlocking controller; and replacement of electric switches on the north end of the Wayne Interlocking.	$14.00 M	2022 - 2028 Project	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia Delaware (State) New Jersey
Interlocking Improvement Program				
Rebuilding and reconfiguration of railroad interlockings to improve the delivery of revenue service. Locations included in the program are Regional Rail Main Line: West Interlocking (on the west side of 30th Street Station); Schuylkill Interlocking (on the east side of 30th Street Station); Broad Interlocking (west of Suburban Station); Bartram Interlocking; and 16th Street Interlocking.	$40.00 M	2022 - 2028 Project	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia Delaware (State) New Jersey
Communications & Signal Improvements—Transit Projects (FY 2017 - 2021)				
Broad Street Line Ridge-Spur Signals				
Modernization of the signal system on the Broad Street Line's Broad-Ridge Spur. Work includes signal upgrades to improve operational reliability for the train control systems on the portion of track between Fairmount Interlocking and the 8th and Ridge Terminal Interlocking.	$6.50 M	Design Complete Construction 2015 - 2017	Philadelphia	Philadelphia

COMMUNICATIONS, SIGNAL SYSTEMS AND TECHNOLOGY IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Route 101/102 Positive Train Control				
Installation of a new state-of-the-art Communications Based Train Control (CBTC) system for the Route 101/102 trolley lines. The new system will automatically enforce trolley separation and provide overspeed and roadway worker protection. New power switching will be installed to facilitate operational flexibility.	$74.96 M	Design Complete Construction 2015 - 2018	Delaware	Delaware
Communications & Signal Improvements—System-Wide Projects (FY 2017 - 2021)				
Computer Aided Radio Dispatch (CARD) System Replacement				
Replacement of existing Computer Aided Radio Dispatch (CARD) system. Project will retire the existing 502MHz radio system and replace it with a new state-of-the-art Computer Aided Dispatch and communications network. The new CARD system will be used to dispatch SEPTA buses and trolleys. The new system will provide real-time train arrival information to be displayed on existing and new Audio Visual Public Address (AVPA) signs, as well as the SEPTA website. The project will modernize and improve reliability of vehicle, AVPA and website data.	$32.50 M	Design 2016 - 2017 Construction 2018 - 2020	System-Wide	Bucks Chester Delaware Montgomery Philadelphia Delaware (State) New Jersey
Real-Time Information / Audio Visual Public Address (AVPA) System				
Upgrades and modernization of SEPTA's real-time arrival information for customers on all modes of transit. Includes installation of a Real Time Vehicle Locating system on all SEPTA vehicles, providing vehicle location information that will be accessible to the public via smartphone applications and the web. In addition, SEPTA will upgrade Audio Visual Public Address (AVPA) equipment at all railroad and transit stations.	$34.73 M	Design 2014 - 2016 Construction 2016 - 2019	System-Wide	Bucks Chester Delaware Montgomery Philadelphia Delaware (State) New Jersey

COMMUNICATIONS, SIGNAL SYSTEMS AND TECHNOLOGY IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Technology Improvements (FY 2017 - 2028)				
Information Technology Program				
Enhancements to SEPTA's information technology infrastructure and applications. Includes new and replacement computer hardware and software such as desktop computers, laptops, virtual server deployment for energy efficiency and redundancy, upgraded enterprise network systems, digital video recorders and software licenses. The FY 2017 program will include an initiative to adopt an Enterprise Resource Planning (ERP) suite and build out of redundant and resilient systems to support operation systems and public facing applications. Operational System improvements will support the SEPTA Key project, Real-Time Communication and Audio Visual Public Address (AVPA) systems, Railroad Crew Dispatching system, and web/mobile applications. The program also includes replacement of network switches, wireless systems and printers.	$5.0 M Annually	Ongoing Program	System-Wide	Bucks Chester Delaware Montgomery Philadelphia Delaware (State) New Jersey
Scheduling System Enhancements				
SEPTA currently uses the Trapeze Scheduling System, which is an integrated operations management system that streamlines tasks such as scheduling and bus stop management. The Authority needs to enhance the system's operational capabilities and time record management. This project will build upon SEPTA's current system by adding several enhancements: bidding, dispatch, timekeeping and Yard and Workforce Management.	$8.10 M	Implementation in 2017	System-Wide	Bucks Chester Delaware Montgomery Philadelphia Delaware (State) New Jersey

FINANCIAL OBLIGATIONS

The Capital Asset Lease Program provides for payments attributable to capital leases. For Fiscal Year 2017, leases covered by this program include Amtrak trackage leases, a warehouse lease, copier machines throughout the Authority and communications towers.

State and federal capital funds provide for debt service and the cost of issuance of bonds, notes and other indebtedness incurred by SEPTA. In addition to the three series of bonds previously issued, SEPTA entered into loan agreement with the Delaware Valley Regional Center (DVRC) under the Employment Based Immigration - 5th Preference (EB-5) Program for up to $300 million in capital financing. There are no outstanding borrowings under this loan agreement.

SEPTA Operation on Amtrak's Keystone Corridor

Financial Obligations - Program Elements	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022 - 2028	12-Year Program Total	Beyond FY 2028	Total Budget
	$Millions									
Capital Asset Lease Program	$0.00	$48.02	$49.45	$54.30	$55.34	$56.45	$428.25	$691.81	$0.00	$691.81
Debt Service	$0.00	$51.71	$51.62	$53.58	$47.30	$49.21	$342.52	$595.94	$288.23	$884.17
TOTAL	$0.00	$99.73	$101.07	$107.88	$102.64	$105.66	$770.77	$1,287.75	$288.23	$1,575.98

Wayne Junction Station

Silverliner V Railcar

FINANCIAL OBLIGATIONS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Capital Asset Leases (FY 2017 - 2028)				
Amtrak Trackage - This lease provides for the right to use Amtrak tracks for SEPTA's Trenton, Wilmington/Newark and Paoli/Thorndale Regional Rail service, and portions of the Chestnut Hill West, Media/Elwyn, Airport and Cynwyd Regional Rail Lines. With the enactment of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA), Congress mandated that a standardized methodology be developed to allocate costs among the Northeast Corridor (NEC) owners and operators that ensures each agency take the full financial responsibility for its use of shared NEC infrastructure and related facilities. Payments made to Amtrak under this lease are SEPTA's costs based on methodologies and policies established by the Northeast Corridor (NEC) Infrastructure and Operations Advisory Commission for all NEC users pursuant to PRIIA. **Communications Towers** - This lease provides for the right to house voice and data transmission and receiving equipment on towers at the following locations: Y-100, Loews Hotel, Malvern, West Rockhill, Oxford Valley Mall, Newtown Square, and New Britain. **Copiers** - This lease provides for rental of copiers, which are dispersed throughout SEPTA's headquarters and transportation/maintenance facilities. **Warehouse Facility** - This lease provides for rental of a storeroom facility at 2045 Wheatsheaf Lane in the City of Philadelphia.	12 Year Total $691.81 M	Ongoing Program through 2028	Bucks Chester Delaware Montgomery Philadelphia Delaware (state) New Jersey	Bucks Chester Delaware Montgomery Philadelphia Delaware (state) New Jersey

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Debt Service (FY 2017 - 2028)				
Payments on Capital Grant Receipts Bonds, Series 2011				
Acquisition of 120 Silverliner V Regional Rail Cars These new electric multiple-unit (EMU) cars have replaced the Silverliner II and III rail cars, and provided additional cars to supplement the regional rail car fleet in response to ridership growth. Vehicles fully comply with Americans with Disabilities Act (ADA) requirements and federal and state regulations regarding safety features and systems. The cars include enhanced passenger amenities, such as larger windows, wider aisles, a state-of-the-art climate control system, and an enhanced seating arrangement with more two-passenger seating. The new cars have electronic exterior and interior destination signs, voice annunciation of train destination and upcoming station stops, interior video display monitors and the capability for SEPTA's Control Center to broadcast messages directly to customers on the trains. In addition, these cars are equipped with on-board video surveillance and automatic passenger counting systems. The total cost for the Silverliner V Rail Car Acquisition Project ($325.7 M) is funded through a combination of grants and capital financing.	12 Year Debt Service Total for Series 2007, 2010 & 2011 Bonds and EB-5 Loan $595.94 M	Final year of debt service funding for Series 2011 Bonds - 2028	Bucks Chester Delaware Montgomery Philadelphia Delaware (State) New Jersey	Bucks Chester Delaware Montgomery Philadelphia Delaware (State) New Jersey
Rehabilitation of the Wayne Junction Intermodal Facility The Wayne Junction Intermodal Facility was originally constructed at the turn of the 20th Century. This project provided for restoring the station's historic integrity while modernizing its structure to provide a more accessible and environmentally friendly facility for local residents. The project provided for the enhancement of passenger amenities such as lighting, signage, shelters, audio and visual public announcement system, windscreens, benches, HVAC systems (heating, ventilation, air conditioning), and sanitary systems. Structural improvements included station building rehabilitation and ADA accessibility modifications, such as high level platforms, elevators, stairway renovations, passenger tunnel improvements, new canopies and shelter improvements. The total cost of the Wayne Junction Intermodal Facility project ($31.5 M) is funded through a Federal Transit Administration Bus and Bus Facilities Livability Grant and capital financing. The construction phase of the project achieved substantial completion in September 2015.				

FINANCIAL OBLIGATIONS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Payments on Converted Indexed Rate Revenue Refunding Bonds, Series 2007				
On December 18, 2012, the Authority converted the Variable Rate Refunding Bonds, Series 2007, from the Daily Rate Mode to the Indexed Rate Mode. Proceeds from the Variable Rate Revenue Refunding Bonds, Series 2007 were used to refund the Special Revenue Bonds, Series 1997, which provided funds for the buyout of leases on Bombardier Rail Cars, General Motors Locomotives and Frazer Rail Car Maintenance Shop and for other capital improvement projects, including the Market-Frankford Line car acquisition, Broad Street Line cable replacement, Frazer Yard interlocking construction and Market-Frankford Line infrastructure improvements.		Final year of debt service funding for Series 2007 Bonds - 2021		
Payments on Fixed Rate Revenue Refunding Bonds, Series 2010				
Proceeds from the Fixed Rate Refunding Bonds were used to refund the Special Revenue Bonds, Series 1999, which provided funds for the Market-Frankford Line cars, various capital improvement projects, and partial refunding of Series 1995A Bonds.		Final year of debt service funding for Series 2010 Bonds - 2027		
Capital Financing - EB-5 Loan				
In January 2016, SEPTA entered into a loan agreement with the Delaware Valley Regional Center (DVRC), pursuant to the Employment Based Immigration-5th preference (EB-5) program administered by United States Citizenship and Immigration Services (USCIS). The loan will be made available to SEPTA over a period of several years and may provide up to $300 million to partially fund certain capital projects such as the acquisition of locomotives, expansion of Frazer Yard, and substation rehabilitation projects. The loan comprises a 5-year interest-only period with an option that provides SEPTA the ability to extend the loan for an additional period of 20 years. There are currently no outstanding borrowings under this loan agreement.		Final year of debt service funding for EB-5 loan - 2044		

INFRASTRUCTURE SAFETY RENEWAL PROGRAM (ISRP)

The annual Infrastructure Safety Renewal Program (ISRP) provides for the restoration by SEPTA forces of SEPTA's City and Suburban transit and railroad infrastructure to a state of good repair. Projects to be advanced include:

- **Track and Right-of-Way** - Renewal or replacement of track, switches, and special work including yard and shop areas; track surfacing; fencing; and grade crossing improvements.
- **Station Facilities** - Rehabilitation of station buildings and associated facilities including roofs and canopies; ticket offices and waiting rooms; platforms; lighting; sanitary facilities; escalators; elevators; parking; and accessibility improvements.
- **Communications and Signals Systems** - Rehabilitation of signal systems and select communications equipment.
- **Power Systems** - Rehabilitation of electric traction and power systems and associated components including catenary and support structures; feeders and transmission lines; and localized and centralized control facilities.
- **Maintenance/Support Facilities** - Rehabilitation of shops, maintenance/storage yards, and associated maintenance and support facilities, including improvements or replacement of air compressors, sump pumps, sprinkler systems, tunnel lighting, duct banks, vehicle servicing equipment, bridges and other support functions.

Girard Avenue Trolley Track Renewal

Infrastructure Safety Renewal Program - Program Elements	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022-2028	12-Year Program Total	Beyond FY 2028	Total Budget
	$Millions									
Infrastructure Safety Renewal Program	$0.00	$43.50	$44.50	$45.50	$46.50	$47.50	$360.50	$588.00	$0.00	$588.00
TOTAL	$0.00	$43.50	$44.50	$45.50	$46.50	$47.50	$360.50	$588.00	$0.00	$588.00

Open Deck Bridge Timber Renewal

Wynnewood Rd. Station (NHSL)

INFRASTRUCTURE SAFETY RENEWAL PROGRAM (ISRP)

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Fiscal Year 2017 ISRP Program	**$43.5 M**	**FY 2017 Program**	**System-wide**	**System-wide**

Track and Right-of-Way Program

Regional Rail - Curve Worn Rail Renewal Program (Chestnut Hill East Branch); Regional Rail Main Line Wayne Junction to Glenside Tie and Surface Project; Interlocking Rehabilitation Program; Open Deck Bridge Timber Renewal Program; and Overbrook Yard Tie Renewal.

City/Suburban Transit - Curve Worn Rail Renewal Program; Special Track Work Renewal Program; Suburban Transit Grade Crossing Renewal Program (Route 101 Paper Mill and Scenic Roads); and Street Track Renewal Program.

Station Facilities Program

Regional Rail - Platform Improvement Program; Wilmington Line Station Improvement Program; Paoli Line Station Improvement Program; and Fortuna Station Improvement Program.

City/Suburban Transit - Station and Tunnel Lighting Program; Norristown High Speed Line (NHSL) Station Improvements; Station Entrance/Stair Improvements (Market-Frankford and Broad Street Subway Lines); Station Renewal Programs: Broad Street Subway, Market-Frankford and Trolley Lines.

Maintenance/Support Facilities Program

Regional Rail - Retaining Wall Rehabilitation Program; Bridge Rehabilitation Program; Outlying Yard Safety Improvement Program; Employee Facilities Improvement Program; Critical Catenary Structural Rehabilitation Program; and Culvert/Headwall Improvement Program.

City/Suburban Transit - Garage and Shop Improvements (City & Suburban Transit); Vent Well and Emergency Exit Program; Employee Facilities Improvement Program; Pump Room Overhaul Program; Sewage Ejector Replacement Program; V-tag System Upgrade; Subway Column Rehabilitation and Fall Arrest System Installation.

Communications and Signals Program

Regional Rail - Communications Cable Installation Program; Grade Crossing Flashing Light Upgrade Program; Core Interlocking Reliability Improvement Program; and Main Line Cab No-Wayside Train Control Installation Program.

City/Suburban Transit - Station Communications Equipment Tech Refresh Project - Broad Street Subway and Market-Frankford Lines; Station Signage Refresh Project and Erie Interlocking Tech Refresh.

Regional Rail/City & Suburban Transit - Video Storage and Audio-Visual Public Address Tech Refresh and Improvements Programs.

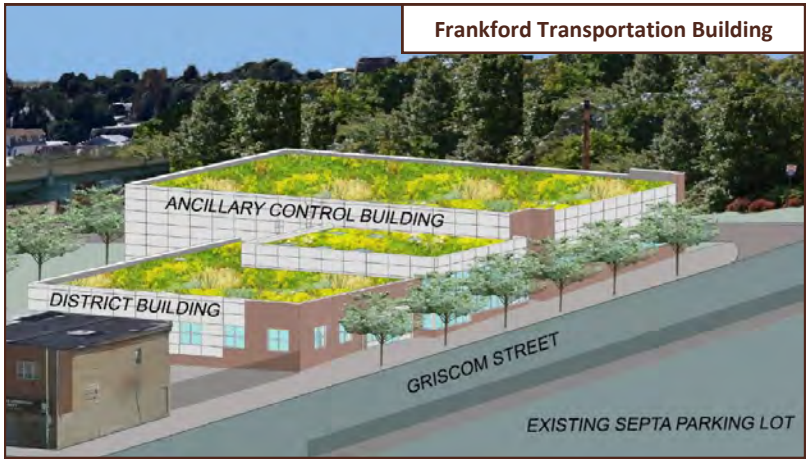
Power Systems Program

Regional Rail - Norristown Line Catenary Replacement; Substation Control Battery Replacement; Sectionalizing Switch/Remote Terminal Unit (RTU)/Section Insulators (SI) Replacement Program; Control Center and Radio Room Uninterrupted Power Supply (UPS) Replacement; Metering and Relay Protection and Upgrade Program; Overhead Catenary System (OCS) Clearance Improvement Program; and Roberts Car Shop and Car Wash Catenary Replacement.

City/Suburban Transit - DC Traction Power Cable Replacement Program; Manhole Rehabilitation Program; Duct Bank Replacement Program; Trolley Wire Replacement Program; Trackless Trolley Power System Upgrade Program; Substation Improvement Program; Substation Supervisory Control and Data Acquisition (SCADA) Control Upgrade; Substation Control Battery Replacement; and STD LED Lighting Upgrade Program.

MAINTENANCE/TRANSPORTATION SHOPS AND OFFICES

This program provides for improvements to SEPTA's bus, rail, and facilities maintenance shops, and office buildings. Program elements include replacement of fire suppression systems, vehicle washer systems, and boiler systems. This program also supports ongoing programs, including the wheel truing program, bus and steel wheel lift programs, underground storage tank replacement program, shop and yard upgrades, and paving improvements. In addition, this program addresses remediation and clean up activities at select facilities as well as activities that will reduce SEPTA's carbon footprint and enhance SEPTA's commitment to sustainability. This program also includes a roof rehabilitation and replacement program, which involves replacing and upgrading roof structures at numerous facilities, to include new mechanical equipment, electrical connections, brick repairs, roof-mounted HVAC equipment, and the replacement of old roofing systems.



Frankford Transportation Building

Maintenance/Transportation Shops & Offices Program Elements	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022 - 2028	12-Year Program Total	Beyond FY 2028	Total Budget
	$Millions									
Maintenance/Transportation Facilities	$13.89	$14.58	$33.30	$48.32	$53.35	$26.05	$101.32	$276.92	$13.36	$304.17
Roof Program	$9.14	$7.91	$9.63	$8.13	$8.17	$8.30	$50.66	$92.80	$5.85	$107.79
TOTAL	$23.03	$22.49	$42.93	$56.45	$61.52	$34.35	$151.98	$369.72	$19.21	$411.96

Fire Suppression Upgrades

Vehicle Washers

Roof Replacements

MAINTENANCE/TRANSPORTATION SHOPS AND OFFICES

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Maintenance & Transportation Facilities (FY 2017 - 2021)				
103 Victory Avenue Facility Improvements				
Improvements to shops and offices located at 103 Victory Avenue. Work includes replacing the existing office building with an accessible office building, replacing the existing shop areas with a new shop complex, construction of a salt dome, improvements to parking and vehicle circulation and installation of a stormwater management system.	$10.47 M	Design Complete Construction 2016 - 2017	Delaware	Delaware Montgomery Philadelphia
Allegheny Bus Washer				
Replacement and upgrade of existing vehicle wash systems at Allegheny Bus Garage.	$3.55 M	Design Complete Construction 2016 - 2017	Philadelphia	Philadelphia
Boiler Replacement Program				
Replacement of boilers at various SEPTA facilities including but not limited to Southern Garage and Comly Garage (complete), Callowhill Garage and Elmwood Shop, Wayne Junction Shop and Wayne Junction Line Maintenance, Bridge St. Carhouse, Roberts Avenue Train Wash Building and Roberts Shop, and Allegheny Garage.	$12.00 M	Design / Construction 2017 - 2028	Delaware Montgomery Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Environmental Clean Up and Protection				
Activities include remediation and testing associated with underground storage tanks, lead-based paint and asbestos abatement, contaminated soil and groundwater, and air quality. Site assessments to determine environmental exposures prior to acquiring properties are also included under this program. The program also includes activities that will reduce SEPTA's environmental footprint, such as recycling containers and trash compactors.	$5.89 M	Ongoing	Bucks Chester Delaware Montgomery Philadelphia	Bucks Chester Delaware Montgomery Philadelphia

MAINTENANCE/TRANSPORTATION SHOPS AND OFFICES

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Frankford Transportation Building				
Construction of a stand-alone transportation building at the Frankford Transportation Center and Depot. The new building will house Frankford District Employee Facilities that include operator welfare facilities, dispatching areas, administrative offices and training rooms to accommodate SEPTA Operations personnel. In addition, the facility will provide the space for an Ancillary Control Center. The design of this new building includes many energy efficiency and sustainability elements and will feature a green roof.	$9.70 M	Design Complete Construction 2015 - 2017	Philadelphia	Philadelphia
Frazer Rail Shop and Yard Upgrade				
Upgrade of the Frazer Maintenance Facility to accommodate the expansion of SEPTA's railcar and locomotive fleets including new multi-level cars. Work includes extending three existing storage tracks and adding three new storage tracks; major upgrades to the repair shop and equipment, including the wheel truing machine and drop table; construction of a shop extension, new cleaning track, train washer building, storage building and yardmaster building; utility upgrades and stormwater improvements. In addition, the roof will be upgraded and mechanical equipment and electrical connections will be replaced.	$139.00 M	Design 2016 - 2017 Construction 2016 - 2020	Chester	Bucks Chester Delaware Montgomery Philadelphia
Frontier Garage Roof, Washer and Paving				
Improvements at Frontier Garage including replacement of the existing roof with a new roofing system; replacement and upgrade of the vehicle washer; drainage and site improvements; and rehabilitation of apron paving to correct settlement and paving condition issues.	$9.95 M	Design 2016 - 2017 Construction 2017 - 2018	Montgomery	Bucks Chester Montgomery
On-Site Power for Major Facilities				
Installation of power upgrades at major maintenance and transportation facilities.	$15.00 M	Construction 2017 - 2028	Various	Various

MAINTENANCE/TRANSPORTATION SHOPS AND OFFICES

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Powelton Yard Facility Improvements				
Improvements to Powelton Yard including building repairs, new windows, new bathrooms, and replacement of the storeroom facility currently housed in a former railroad boxcar. Powelton Yard will be reconfigured to permit emergency vehicle access, which is not currently available at this location.	$3.92 M	Design 2015 - 2016 Construction 2016 - 2017	Philadelphia	Philadelphia
SEPTA Headquarters Improvements				
The SEPTA Office Building located at 1234 Market Street was built in 1973 and has served as SEPTA's Headquarters since June 1994. Much of the infrastructure equipment is original or was only partially upgraded at the time of purchase by SEPTA. Many critical components are now well past their useful service lives and will be upgraded under this project. This project will be advanced in phases. Upgrades that will be advanced in the first phase include, but are not limited to, the replacement of fire pump systems and floor covering; and rebuilding the cooling tower structure.	$5.32 M	Design 2015 - 2016 Construction 2016 - 2017	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Southern Garage Stormwater Management & Pavement Improvements				
Rehabilitation of apron paving at Southern Bus Garage to correct settlement and paving condition issues. A new stormwater management system will be installed. This is a joint effort working with the Philadelphia Water Department.	$4.92 M	Design Complete Construction 2016 - 2017	Philadelphia	Philadelphia
Steel Wheel Lift Program				
Rebuilding/modernization or replacement of truck and body hoist systems at various SEPTA steel wheel shops. These hoists are used to facilitate body and truck separation and to elevate railcars to safe heights and hold them as required to perform inspections and repairs under the rail vehicles.	$12.00 M	Construction 2017 - 2028	Philadelphia Delaware	Bucks Chester Delaware Montgomery Philadelphia

MAINTENANCE/TRANSPORTATION SHOPS AND OFFICES

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Underground Storage Tank Replacement Program				
Replacement of storage tanks at various SEPTA facilities including but not limited to Berridge Shop, Powelton Yard, Wayne Junction Line Maintenance and Wayne Junction Shop, Frontier Bus Garage, Victory Bus Garage, and Southern Bus Garage.	$21.00 M	Construction 2017 - 2028	Delaware Montgomery Philadelphia	Delaware Montgomery Philadelphia
Wheel Truing Program				
Reconditioning and rebuilding wheel truing machines at Overbrook Shop, Woodland Shop, 69th Street Shop and Fern Rock Shop.	$15.00 M	Construction 2017 - 2028	Delaware Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Maintenance & Transportation Facilities (FY 2022 - 2028)				
Bus Lift Program				
Replacement of in-ground lifts and portable lifts at selected City Transit and Suburban Transit bus maintenance facilities.	$10.50 M	2022 - 2028 Project	Delaware Montgomery Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Overhead and Fire Doors				
Replacement of overhead and fire doors at various facilities.	$8.75 M	2022 - 2028 Project	Bucks Delaware Philadelphia	Bucks Delaware Philadelphia
Vehicle Washer Program				
Replacement and upgrading of the vehicle washers at various SEPTA facilities including Overbrook Shop and additional locations.	$17.20 M	2022 - 2028 Project	Various	Bucks Chester Delaware Montgomery Philadelphia

MAINTENANCE/TRANSPORTATION SHOPS AND OFFICES

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Roof Program (FY 2017 - 2021)				
2nd & Wyoming / Berridge Roof Replacement				
Replacement of the existing roof at SEPTA's 2nd & Wyoming Office and Berridge Bus Maintenance Facility with new 5-ply coal tar build-up roofing system. This project includes asbestos abatement, replacement of mechanical equipment and electrical connections for the Bus Maintenance Facility and 2nd & Wyoming Avenue Office Building.	$15.84 M	Design Complete Construction 2015 - 2017	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
69th St. Transportation Center and Rt. 101/102 (MSHL) Shop Roof Replacement				
Replacement and upgrade of existing roofs with new 5-ply coal tar build-up roofing system. Includes replacement of mechanical equipment, electrical connections, and terra cotta and brick repairs.	$14.10 M	Design Complete Construction 2016 - 2018	Delaware	Delaware Montgomery Philadelphia
Broad Substation Roof Replacement				
Replacement of the roof at Broad Substation, located on Mt. Vernon Street and serving the Broad Street Line.	$2.00 M	Design 2016 - 2017 Construction 2017 - 2018	Philadelphia	Philadelphia
Comly Roof Replacement				
Replacement and upgrade of existing roof at Comly Garage with new 5-ply coal tar build-up roofing system. Includes replacement of mechanical equipment and electrical connections.	$7.70 M	Design 2020 - 2021 Construction 2021 - 2022	Philadelphia	Philadelphia
Courtland Shop Roof Replacement				
Replacement of Courtland Shop roofs including asbestos abatement.	$7.15 M	Design 2017 - 2018 Construction 2018 - 2019	Philadelphia	Philadelphia

MAINTENANCE/TRANSPORTATION SHOPS AND OFFICES

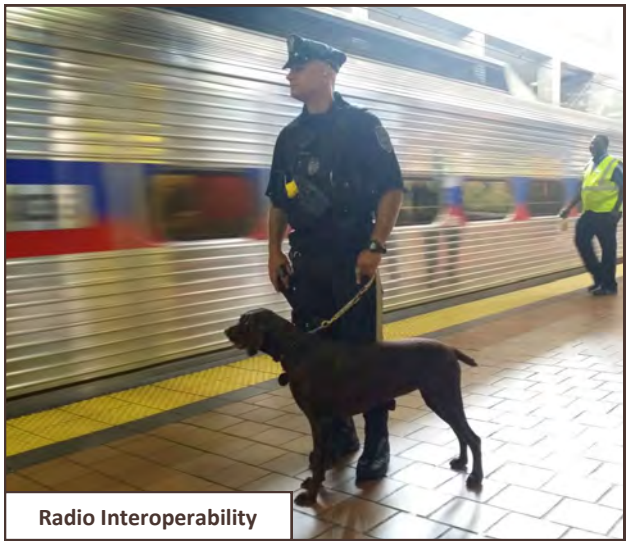
Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Overbrook Maintenance Facility Roof Replacement				
Replacement and upgrade of existing roof with new 5-ply coal tar build-up roofing system. Includes replacement of mechanical equipment and electrical connections.	$7.55 M	Design 2016 - 2017 Construction 2017 - 2018	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Southern Garage Roof Replacement				
Replacement and upgrade of existing roof system at Southern Garage.	$7.70 M	Design 2019 - 2020 Construction 2020 - 2021	Philadelphia	Philadelphia
Roof Program (FY2022 - 2028)				
5800 Bustleton Roof Replacement				
Replacement of roof at SEPTA office building located at 5800 Bustleton Avenue.	$1.75 M	2022 - 2028 Project	Philadelphia	Philadelphia
Maintenance & Substations Roof Program				
Replacement and upgrade of the existing roofs at substations and maintenance facilities throughout the SEPTA system. Work may include replacement of mechanical equipment and electrical connections.	$21.00 M	2022 - 2028 Project	Various	Various
Regional Rail Stations Roof Program				
Roof replacement at various small to medium stations. Locations to be determined.	$21.00 M	2022 - 2028 Project	Various	Various
Sansom Substation Roof Replacement				
Replacement of roof at Sansom Substation, located on Sansom Street and serving the Market-Frankford Line.	$2.00 M	2022 - 2028 Project	Philadelphia	Philadelphia

SAFETY & SECURITY IMPROVEMENTS

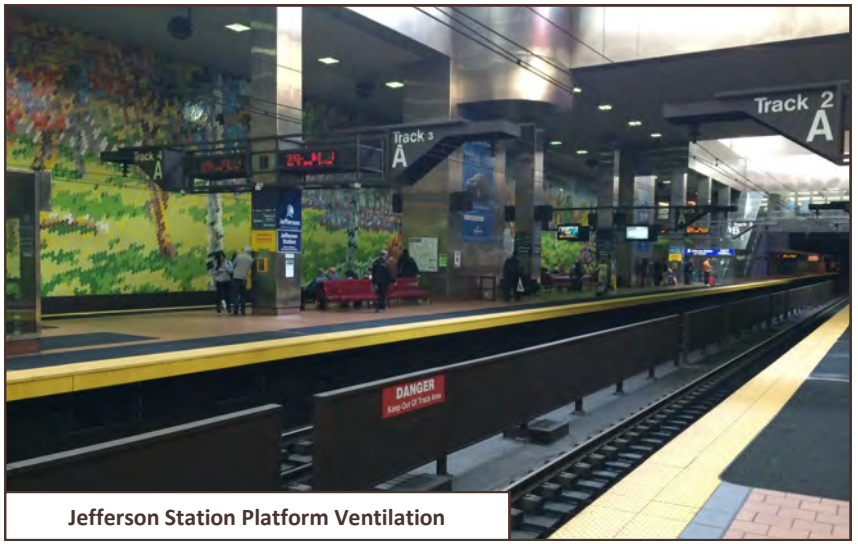
Safety is a key objective of SEPTA's Strategic Business Plan. All projects advanced in the capital program have a safety-first focus throughout. Having a comprehensive safety plan and program is part of SEPTA's goal to provide passengers with safe, reliable, and efficient transportation. This program includes life safety assessments, facility and vehicle security measures, and interoperable communications improvement projects. This program also includes projects funded with competitive U. S. Department of Homeland Security grant funds. The Authority is part of the Philadelphia Area Regional Transit Security Working Group (PARTSWG), which is working to advance safety and security improvements for all transit operations into and out of Philadelphia and the surrounding area.

Emergency Simulation Drills

Safety & Security Improvements - Program Elements	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022-2028	12-Year Program Total	Beyond FY 2028	Total Budget
	$Millions									
Safety & Security Improvements	$6.83	$16.50	$17.39	$18.09	$17.51	$14.91	$51.58	$135.98	$0.00	$142.81
TOTAL	$6.83	$16.50	$17.39	$18.09	$17.51	$14.91	$51.58	$135.98	$0.00	$142.81



Radio Interoperability



Jefferson Station Platform Ventilation

SAFETY & SECURITY IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Safety & Security Projects (FY 2017 - 2021)				
Allegheny Garage Ventilation				
Removal and replacement of eight (8) roof mounted heat recovery ventilation units at Allegheny Garage including all related ductwork, sound attenuators, structural supports and electrical power/controls.	$3.67 M	Design 2016 - 2017 Construction 2017 - 2018	Philadelphia	Philadelphia
Bus Turn Alerting System				
Installation of a bus turn alerting system on SEPTA buses. The system will serve as a secondary warning system to alert customers, bicyclists and pedestrians, both audibly and visually, that a bus is making a turn.	$4.63 M	Construction 2016 - 2019	System-wide	Bucks Chester Delaware Montgomery Philadelphia
Jefferson Station Platform Ventilation System				
Removal and replacement of sixteen (16) roof mounted exhaust/supply fans including all related ductwork, sound attenuators, structural improvements and electrical controls at Jefferson Station.	$5.08 M	Design 2015 - 2016 Construction 2016 - 2017	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Midvale Facility and Security Enhancements				
Construction of a new consolidated employee and storage facility at SEPTA's Midvale Complex. This facility is needed to provide an accessible, secure and functional facility for SEPTA Power, Track, Bridges and Buildings and Utilities personnel, and to protect high cost material used for SEPTA operations from theft and damage. As part of this project, Life Safety improvements including fire suppression, security elements, communications systems and perimeter fencing will be installed.	$26.70 M	Design 2016 - 2018 Construction 2018 - 2020	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia

SAFETY & SECURITY IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Radio Interoperability				
Replacement of the existing 40-year old radiax cable in the Market-Frankford Subway and Broad Street Subway, and procurement of new radio equipment for the Market Street, Trolley, and Railroad tunnels. This project will upgrade SEPTA's sub-surface communications infrastructure with a new distributed communication system. This will provide the capability to communicate both above and below ground using two different frequencies: SEPTA's existing train dispatch and maintenance channels, and the City of Philadelphia's channels for fire, police, and emergency medical services.	$24.89 M	Design Complete Construction 2016 - 2018	Philadelphia	Philadelphia
Safety and Security Infrastructure Hardening Program				
Infrastructure improvements and modifications throughout the SEPTA System that will improve safety and security of both assets and passengers. This program will allow SEPTA to perform analysis and conceptual design of key safety and security initiatives.	$14 M	Ongoing	Bucks Chester Delaware Montgomery Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Station Ventilation Improvements at Suburban and AT&T Stations				
Replacement of the existing ventilation systems at Suburban Station and AT&T Station. Suburban Station work includes replacement of eleven (11) platform level exhaust fans and the installation of eight (8) vane axial exhaust/supply fans for the concourse level smoke abatement system. AT&T Station work includes replacement of the ventilation system and installation of a smoke abatement system. The work at both stations includes all related ductwork, sound attenuators, structural supports and electrical power/controls.	$20.00 M	Design 2015 - 2016 Construction 2016 - 2018	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Tunnel Ventilation System Modifications				
Two (2) engineering assessments for the modeling of existing ventilation and airflow through the Regional Rail Center City Tunnel (Assessment #1) and the Market Subway and Broad Street Subway Tunnels (Assessment #2). Each review has the primary goal of life safety. First, the existing passive system will be evaluated. Next, an active ventilation will be evaluated. Finally, recommendations will be made to improve the ventilation in each tunnel.	$1.30 M (Assessment)	Assessment 2015 - 2017 Construction schedule to be developed	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Wayne Junction Security Improvements (Phase 2)				
Security improvements at Wayne Junction Yard in the City of Philadelphia and provision of secure storage facilities. Includes installation of a secure fence, cameras and improved lighting. In addition, this project includes demolition of two disused, temporary structures (Quonset Huts) that have exceeded their useful life and pose environmental challenges. The huts will be replaced with a new, secure storage structure.	$2.5 M	Design 2016 - 2017 Construction 2017 - 2018	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Safety & Security Projects (FY 2022 - 2028)				
Pump Rooms				
Improvements to pump rooms, which control water levels in SEPTA's transit and railroad tunnels.	$ 10.00 M	2022 - 2028 Project	Philadelphia	Philadelphia
Transit Security Grant Projects (FY 2017 - 2021)				
Through the U.S. Department of Homeland Security, the Transit Security Grant Program provides funds to operators of transit systems to protect critical infrastructure and the traveling public from acts of terrorism, major disasters and other emergencies. From this grant program, SEPTA has funded closed circuit television (CCTV) cameras on vehicles; multi-jurisdictional counter terrorism emergency simulation drills on various transit modes; directed SEPTA Transit Police Patrols in strategically designated areas during periods of elevated alert using specially trained anti-terrorism teams; hazardous material Identification kits for Special Operations and Response Teams (SORT); purchase of explosive detection devices, intrusion detection and surveillance equipment, and bulletproof vests; Special Operations and Response Teams (SORT) and K-9 patrol teams; upgraded mobile communications and Control Center monitoring equipment; installation of video surveillance cameras at transit facilities; implementation of a radio interoperability system (RIOS); and maintenance of a computer aided dispatch and records management system (CAD/RMS) for the Philadelphia region. SEPTA will continue to fund eligible projects from this grant program.	Competitive Annual Program $2.5 M	2016 - 2017	Bucks Chester Delaware Montgomery Philadelphia	Bucks Chester Delaware Montgomery Philadelphia

SEPTA KEY

The SEPTA Key (New Payment Technologies) Project is modernizing SEPTA's antiquated fare payment and collection system by replacing it with a system that utilizes contactless payment devices and readers. New Fare Kiosks located in stations and other terminal locations will improve customer convenience for fare instrument purchases. Key Cards will also be widely available in retail establishments throughout the SEPTA service area and will be reloadable: 1) at Fare Kiosks or ticket offices; 2) automatically through an account with SEPTA; or 3) through an on-line transaction.

SEPTA Key is unique because it will include all of SEPTA's service modes. In addition to bus, rail transit, and regional rail fare collection improvements, this project will include improvements to the payment and collection procedures for SEPTA's Customized Community Transportation (CCT) operation and SEPTA's parking operations. Computer equipment and software systems will support the enhanced system-wide fare collection system.

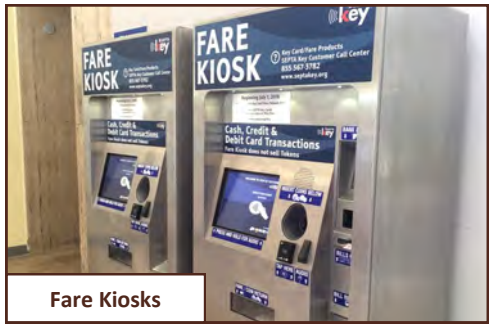
SEPTA has awarded a contract to ACS Transport Solutions, Inc. (now a subsidiary of Xerox Corporation). Phase 1 of the project included the complete design, partial deployment and testing of the data network and the SEPTA Key system. Phase 2 includes the installation of the system on Rail Transit, Trolley and Bus fleets. In the last phase of the project, Regional Rail, Parking Operations, and Customized Community Transportation (CCT) will transition to the SEPTA Key.

Companion projects supporting the SEPTA Key project include: bus and trolley farebox upgrade; Market-Frankford Line and Broad Street Line fiber optics improvements; electrical support for new fare lines at five downtown Railroad stations (Temple University, Jefferson, Suburban Station, 30th Street Station and University City); Broad Street Line, Market-Frankford Line and Trolley station fare line improvements; zone offices to monitor fare lines and assist passengers; control modifications for elevators; Railroad station waiting room security; provision of power to Railroad Parking Payment Stations; and 30th Street Railroad Station ticket office/vendor relocations. These SEPTA Key companion projects are necessary to provide enhanced customer service and achieve cost efficiencies and revenue enhancements.

The SEPTA Board approved a loan agreement with the Philadelphia Industrial Development Corporation (PIDC), Limited Partnership (LP) XXVIII, to partially finance this project. The total project cost includes the loan repayment, interest on the loan and companion project costs.

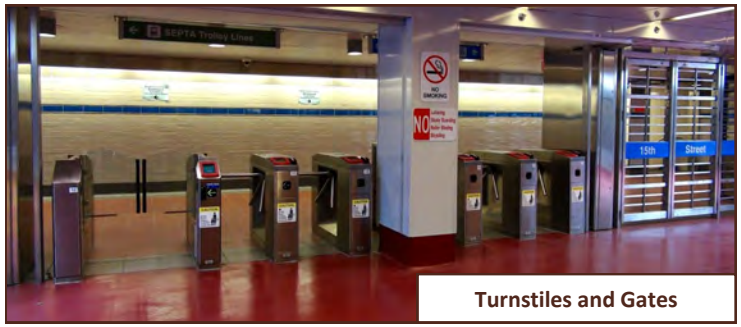
Project status updates are available online at http://www.septa.org/key/.

SEPTA Key	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022-2028	12-Year Program Total	Beyond FY 2028	Total Budget
	$Millions									
SEPTA Key	$69.99	$77.15	$68.76	$52.00	$0.00	$0.00	$0.00	$197.91	$0.00	$267.90
TOTAL	$69.99	$77.15	$68.76	$52.00	$0.00	$0.00	$0.00	$197.91	$0.00	$267.90



Fare Kiosks

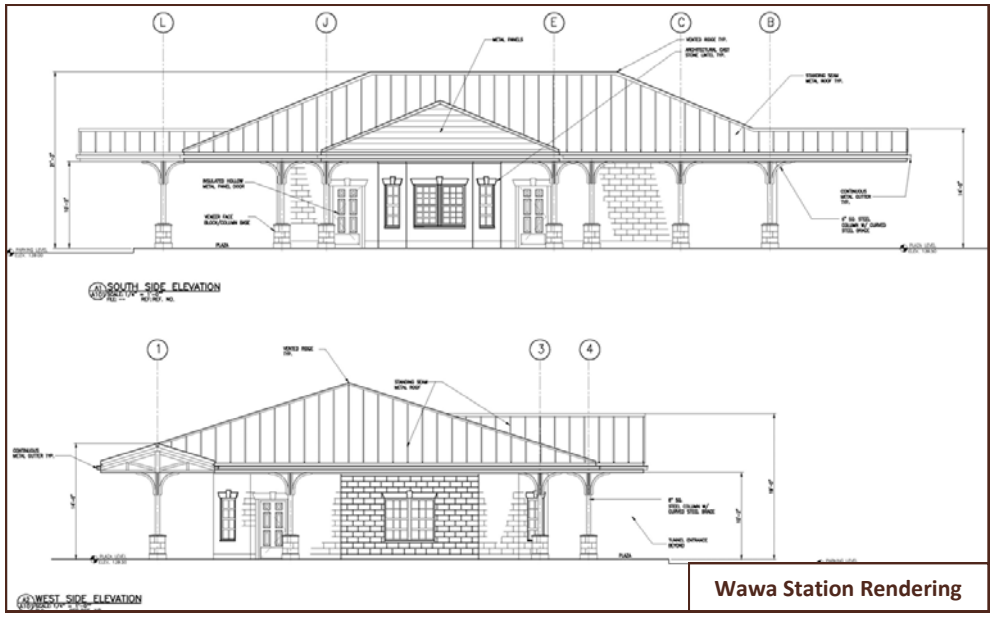
Farebox w/Validator


Turnstiles and Gates

SERVICE RESTORATIONS

This program provides for the Elwyn to Wawa Rail Service Restoration project. This project will restore rail service on the Media/Elwyn Regional Rail Line from its existing terminus at Elwyn, Delaware County, to a new terminus in Wawa, Delaware County. Regional Rail service beyond Elwyn was discontinued in the early 1980s. The project includes renewal of infrastructure, including track, signals and catenary systems, as well as construction of a new station building and parking deck at Wawa.

Service Restorations and Expansions - Project Elements	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022-2028	12-Year Program Total	Beyond FY 2028	Total Budget
	$Millions									
Elwyn to Wawa Rail Service	$12.65	$1.40	$36.99	$36.00	$47.02	$16.54	$0.00	$137.95	$0.00	$150.60
TOTAL	$12.65	$1.40	$36.99	$36.00	$47.02	$16.54	$0.00	$137.95	$0.00	$150.60



Wawa Station Rendering

Elwyn to Wawa Bridge Rehabilitation

SERVICE RESTORATIONS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Elwyn to Wawa Rail Service (FY 2017 - 2021)				
This project will provide for a three mile restoration of rail service from the existing Media/Elwyn Regional Rail Line terminus at Elwyn, Delaware County, to a new terminus in Wawa, Delaware County along the existing line referred to as the West Chester Branch. The scope of work for this project consists of track bed reconstruction including crossties, continuous welded rail and track interlockings; catenary system rehabilitation; a bi-directional signal system with automated train controls and positive train control; communications system improvements; the replacement of three bridges; and the rehabilitation of one bridge and three culverts. The new terminus at Wawa will include a station building with a passenger waiting area and restroom facilities; a high-level island platform with canopy and windscreens; a pedestrian underpass with accessible ramps and stairways; and a 600+ car parking deck. The new facility will be fully ADA compliant. A new traffic intersection and access road connecting U.S Route 1, a major highway artery in the area, to the station will be constructed. Additional project elements include the construction of a railcar storage/ maintenance yard and crew facility on SEPTA property in Lenni, Delaware County.	$150.6 M	Design Complete Construction 2017 - 2020	Delaware	Chester Delaware

STATIONS, LOOPS AND PARKING IMPROVEMENTS

This program provides for the construction, reconstruction or rehabilitation of transit and regional rail stations and terminals, bus/trolley loop facilities, transportation centers, bicycle facilities, and parking expansions and improvements. Program elements include the replacement or rehabilitation of station and loop facility components, such as station buildings, ticket offices, waiting rooms, passenger shelters, canopies, platforms, crosswalks and overpasses, escalators and elevators, lighting, signage, and accessible paths. These projects provide potential opportunities for private developers and municipalities to collaborate with SEPTA in joint development or public-private partnerships. All improvements fully comply with requirements of the Americans with Disabilities Act of 1990. To date, SEPTA has 108 fully accessible stations and operates 106 passenger elevators.

Center City Concourse Rendering

Stations, Loops & Parking Program Elements	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022 - 2028	12-Year Program Total	Beyond FY 2028	Total Budget
	$Millions									
City Hall & 15th Street Stations	$29.63	$7.06	$20.54	$34.93	$42.21	$12.10	$0.00	$116.84	$0.00	$146.47
Exton Station & Garage	$14.94	$0.00	$8.50	$0.00	$2.50	$13.50	$23.50	$48.00	$0.00	$62.94
Levittown Station	$10.76	$4.45	$15.60	$5.20	$0.00	$0.00	$0.00	$25.25	$0.00	$36.01
Paoli Transportation Center	$29.50	$3.00	$3.50	$0.00	$0.00	$0.00	$51.20	$57.70	$0.00	$87.20
Parking Improvements	$24.04	$11.05	$10.40	$11.49	$11.50	$12.89	$87.63	$144.96	$71.89	$240.89
Transit, Regional Rail Stations & Loops	$67.36	$15.74	$22.28	$12.91	$15.51	$14.54	$175.28	$256.26	$163.00	$486.62
Villanova Station	$7.81	$2.50	$5.30	$5.12	$5.96	$3.91	$0.00	$22.79	$0.00	$30.60
TOTAL	$184.04	$43.80	$86.12	$69.65	$77.68	$56.94	$337.61	$671.80	$234.89	$1,090.73

40th Street Station Rendering

Levittown Station Rendering

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
City Hall & 15th Street Stations				
Rehabilitation of City Hall Station on the Broad Street Line and 15th Street Station on the Market-Frankford Line to make the stations fully ADA accessible; bring the stations to a state of good repair; improve customer use, safety, and security; and reduce heavy maintenance costs. Specifically, the project will: • Provide full access for riders with disabilities though new elevators and ramps to all levels of both stations, new and wider ramped corridors connecting the stations, and new accessible fare line gates. • Improve passenger flow with new and reconfigured fare lines outfitted for the new SEPTA Key program, new stairs and railings, and more open areas in the 15th Street Mezzanine and on the platforms. • Update station interiors and systems including new architectural finishes, new signs, Art-in-Transit, new seating and other amenities, new lighting and public address systems, and closed-circuit TV. • Provide structural repairs and upgrades, mechanical and natural ventilation and improvements to prevent/intercept water infiltration and inflow. The 15th Street/City Hall Stations project has been divided into the following phases: • Dilworth Park Phase (complete): Included work to prepare for the park's reconstruction by the Center City District (CCD) and construction of the new station entrance in the park outside the west portal of City Hall. • 15th Street Station: New elevators for 15th Street Station and overall interior renovations and upgrades to station finishes, lighting, fare lines and amenities. • Inter-Station Connections and City Hall Station structural work: New and widened corridors with ramps, improved ventilation structures, platform wall openings for easier connections, and new elevator shaftways from the mezzanines to the platforms. • City Hall Station: Upgrades within City Hall Station including elevators to complete ADA compliance and new or renovated platforms, stairs, lighting, and amenities.	$146.47 M	15th Street & City Hall Stations Design 2014 - 2017 Construction: 15th Street 2016 - 2018 City Hall 2017 - 2020	Philadelphia	Philadelphia

STATIONS, LOOPS AND PARKING IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Exton Station Improvements				
This project, which will be advanced in phases, will include the construction of full length high-level platforms, a station building, bus circulation loops, and a multi-level parking garage at Exton Station on the Paoli-Thorndale Regional Rail Line. Phase I encompasses the construction of high-level platforms with canopies and wind screens, stormwater management improvements and a new station building. The station facilities will be fully ADA compliant. New lighting, signage, security features, and passenger amenities will also be provided. Phase 2 comprises the construction of bus circulation loops with bus shelters. The planned bus circulator loops will promote intermodal access to the station. Phase 3 includes the development and construction of a fully accessible, multi-level parking garage with pathways to the station platforms. The quantity of parking spaces and garage levels will be determined as part of the Phase 3 design.	Phase 1: $23.44 M Phase 2 & 3: $39.50 M Total Project: $62.94 M	Phase 1: Design Complete Construction 2015 - 2018 Phase 2 & 3: Design 2020 - 2021 Construction 2021 - 2024	Chester	Chester
Levittown Station Reconstruction				
Improvements to Levittown Station on the Trenton Regional Rail Line that will make the station fully ADA accessible. Work includes installation of new full length high-level platforms with canopies; replacement of the station building; parking improvements and expansion; stormwater management; new signage, lighting, and passenger amenities. In addition, a new pedestrian overpass complete with elevators will be constructed to replace the old tunnel. Bus loops will be constructed and bus shelters installed to promote intermodal access, improve traffic flow, and enhance safety for motorists and pedestrians through the station and parking areas.	$36.01 M	Design Complete Construction 2015 - 2018	Bucks	Bucks

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Paoli Intermodal Transportation Center				
This project provides for the engineering and construction of a new multi-modal transportation center in Paoli, Chester County. The new facility will be located on the Paoli/Thorndale Regional Rail Line at the approximate location of the existing station. Connecting services include Bus Routes 92, 105, 106, 204, 205 and 206. SEPTA is partnering with PennDOT and Amtrak to advance this project. The project will be advanced in two phases. Phase 1 will make the existing station ADA accessible. This phase includes construction of a pedestrian overpass with a total of three elevators linking inbound and outbound station parking lots as well as a new full length high-level center platform. The outbound parking areas will be reconfigured and pedestrian linkages, such as sidewalks and crosswalks, will be provided throughout the station area. Phase 2 includes an intermodal station complex complete with an additional high-level platform on the outbound side, passenger amenities, enhanced bus facilities, and a 600-plus space commuter parking garage. A companion PennDOT project will consist of the extension of Darby Road over the railroad, including a new bridge connecting to the station, and the removal of the North Valley Road bridge. The companion project must be completed prior to Phase 2 construction.	Phase 1: $36.00 M Phase 2: $51.20 M	Phase 1: Design 2015-2016 Construction 2016 - 2018 Phase 2: FY 2022 - 2028 Project Construction Schedule to be Developed	Chester	Chester
Parking Improvements/Expansions (FY 2017 - 2021)				
69th Street Transportation Center Parking Garage				
Development and construction of a fully accessible, 433-space parking garage at the 69th Street Transportation Center, including pedestrian connections to the historic 69th Street Terminal building. Phase 1 of the project will address site and utility work within the project perimeter, as well as upgrading electrical facilities. Phase 2 is a Joint Development Project that will include construction of the parking garage, bus terminal and pedestrian connections between the facilities.	$31.01 M	Design Complete Phase 1: Construction 2015 - 2016 Phase 2: Joint Development Project Construction 2017 - 2019	Delaware	Chester Delaware Montgomery Philadelphia

STATIONS, LOOPS AND PARKING IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Conshohocken Station & Parking				
Construction of a new fully ADA accessible station, station access improvements and additional parking at Conshohocken Station on the Manayunk/Norristown Regional Rail Line. This station will receive new full length high-level platforms; new passenger shelters; accessible pathways, sidewalks and handrails/guardrails; bike facilities; additional roadway access to the station; new signage and lighting; stormwater management systems and landscaping. SEPTA is evaluating public-private partnership opportunities to build a parking garage at the station.	$30.00 M	Design 2017 - 2018 Construction 2018 - 2020	Montgomery	Montgomery Philadelphia
Gwynedd Valley Station Parking				
Parking expansion and improvements at Gwynedd Valley Station on the Lansdale/Doylestown Regional Rail Line. Includes construction of an additional parking lot, accessible pathways, signage, new lighting, stormwater management system improvements and landscaping.	$2.54 M	Design Complete Construction 2016 - 2017	Montgomery	Montgomery
Lansdale Parking Garage and Lansdale Area Improvements				
Construction of a fully accessible 680-space parking garage at the Lansdale Regional Rail Station, resulting in a total of 895 parking spaces at the station. A pedestrian overpass will provide a direct connection to a future Transit Oriented Development (TOD) project on the Borough's Madison Avenue parking lot. In addition, the following Lansdale area companion improvements will be advanced: Enhancements to the Main Street entrance to the station; construction of a bus layover area on Railroad Street south of Main Street adjacent to the tracks; and construction of a new station at 9th Street (complete).	$39.33 M Garage $2.95 M 9th Street Station $0.97 M Bus Layover	Design Complete Construction 2015 - 2017	Montgomery	Montgomery

STATIONS, LOOPS AND PARKING IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Noble Station, Parking Garage and Storage Track				
Construction of new station facilities, parking garage and storage track at Noble Station on the West Trenton Regional Rail Line, making the station fully ADA accessible. The new station will include full length high-level platforms; canopies and passenger shelters; accessible pathways, sidewalks and handrails/guardrails; new signage, lighting and security cameras; stormwater management systems and landscaping.	$53.00 M	Design 2015 - 2018 Construction 2021 - 2025	Montgomery	Bucks Montgomery Philadelphia
Parking Improvements/Expansions (FY 2022 - 2028)				
Fern Rock Complex				
Renovation of Fern Rock Complex to enhance accessibility, expand parking capacity and increase operational efficiency. This project provides for station and accessibility improvements including ramps; new structured parking deck and surface lot; improved access between the Regional Rail and Broad Street lines; new bus shelters; and signage, lighting and drainage improvements.	$77.50 M	2022 - 2028 Project	Philadelphia	Bucks Montgomery Philadelphia
Philmont Station Parking				
Parking expansion and improvements at Philmont Station on the West Trenton Regional Rail Line. Includes construction of new parking spaces, improvements to the existing parking lot, new curbing, accessible pathways, signage, new lighting, stormwater management system improvements and landscaping.	$3.00 M	Design Complete Construction 2022 - 2028	Montgomery	Montgomery

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Transit & Regional Rail Stations Program — *Regional Rail* (FY 2017 - 2021)				
Ardmore Transportation Center				
Improvements to the Ardmore Transportation Center on the Paoli/Thorndale Regional Rail Line will be completed in two phases. Phase 1 will make this station fully ADA accessible with enhancements that include a new inbound station building; outbound shelters; high and low-level platforms; canopies; passenger amenities; tunnel accessibility improvements; elevators and accessible pathways; improved lighting; new signage; landscaping and site improvements including storm water management; and preparing the foundation for a future parking garage. Phase 1 costs include design for Phase 2. Phase 2 includes the construction of an accessible multi-level parking garage with approximately 500 spaces; landscaping; site improvements; bus berthing area inside the garage; and improved vehicle and pedestrian access to Lancaster Avenue.	Phase 1: $36.29 M Phase 2: $26.05 M	Design 2015 - 2016 Phase 1: Construction 2017 - 2018 Phase 2: Construction 2022 - 2028	Montgomery	Delaware Montgomery
Bicycle Transit Access Program				
Installation of new bicycle parking shelters at select SEPTA Regional Rail stations. Installation will consist of constructing a concrete footing and slab for a pre-cast fabricated structure and bicycle parking racks. This project will be advanced as a phased program providing bicycle parking shelters at 15 stations per year. The addition of bicycle parking shelters will improve bicycle access and security at SEPTA Regional Rail stations, thereby encouraging more customers to bike to transit and expanding opportunities to access SEPTA railroad stations.	$2.50 M	Construction 2017 - 2020	Bucks Chester Delaware Montgomery Philadelphia New Castle, DE	Bucks Chester Delaware Montgomery Philadelphia Delaware (State)

STATIONS, LOOPS AND PARKING IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Jenkintown-Wyncote Station on the Regional Rail Mainline				
Modernization of the existing station building and facilities, and improvements that will make the station fully ADA accessible. This station will receive new full length high-level platforms; new pedestrian overpass and elevators; new passenger shelters; accessible pathways and handrails/ guardrails; new signage and lighting; stormwater management systems and landscaping.	$25.32 M	Design Complete Construction 2017 - 2020	Montgomery	Bucks Montgomery Philadelphia
Secane Station on the Media/Elwyn Regional Rail Line				
Rehabilitation of Secane Station on the Media/Elwyn Regional Rail Line that will make the station fully ADA accessible. Work includes new full length high-level platforms, new pedestrian tunnel and a new station building with canopies. The project will also include accessible pathways and handrails/guardrails; new signage; new lighting; security cameras; drainage improvements and improved pedestrian access to the station.	$21.15 M	Design Complete Construction 2015 - 2017	Delaware	Delaware Philadelphia
Suburban Station Passenger and Crew Amenities				
Construction of new and renovation of existing public restrooms at Suburban Station to address the proposed fare lines to be installed as part of the SEPTA Key initiative. The renovated restrooms will become the new "paid area" restrooms. SEPTA's train crew quarters at Suburban Station will be expanded to include new bathrooms, crew work areas, entrances, mechanical rooms, and expanded sprinkler and fire alarm systems. In addition, SEPTA's Accessible Travel Center (ATC) will be expanded to accommodate accessible restrooms. The ATC will expand into the adjacent Revenue Equipment Maintenance (REM) facility, which will be moved to the existing Railroad Storage Area within Suburban Station, and the Railroad Storage Area will be relocated.	$4.17 M	Design Complete Construction 2015 - 2017	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia Delaware (State) New Jersey

STATIONS, LOOPS AND PARKING IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Swarthmore Roof Replacement & Exterior Improvements				
Replacement of existing roof and canopy and exterior station building improvements to Swarthmore Station on the Media/Elwyn Regional Rail Line. Roof work includes new roofs; replacement of all flashings with copper; and replacing gutters and downspouts. Exterior improvements include painting wood windows, roof trim, canopy structure, fascia, ceiling and exterior wood siding; replacement of skylights and re-pointing select stone mortar joints.	$0.81 M	Design 2015 - 2016 Construction 2016	Delaware	Delaware Philadelphia
Willow Grove Station on the Warminster Regional Rail Line				
Modernization of Willow Grove Station on the Warminster Regional Rail Line that will make the station fully ADA accessible. Work includes a new full length high-level platform; new passenger shelters; accessible pathways and handrails/guardrails; new signage and lighting; stormwater management systems; and landscaping.	$6.50 M	Design 2021 - 2022 Construction 2022 - 2028	Montgomery	Bucks Montgomery Philadelphia
Wyndmoor Canopy Roof Replacement & Station Improvements				
Rehabilitation of Wyndmoor Station on the Chestnut Hill East Regional Rail Line. This project provides for replacement of roofs, including roofs on the canopies and outbound station building; repairs to the canopy columns and support beams; replacement of deteriorated metal windscreens with standard guardrails; replacement of windows and doors; and masonry repairs and pointing work.	$1.54 M	Design 2015 - 2016 Construction 2016	Philadelphia	Philadelphia
Yardley Station on the West Trenton Regional Rail Line				
Renewal of facilities at Yardley Station on the West Trenton Regional Rail Line with accessibility improvements. This station will receive a new high-level boarding platform, ADA compliant pathways, two open-air shelters, and a complete signage, site accessory and lighting upgrade.	$5.50 M	Design Complete Construction 2016 - 2017	Bucks	Bucks Montgomery Philadelphia New Jersey

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Transit & Regional Rail Stations Program — *Regional Rail* (FY 2022 - 2028)				
East Falls Station				
Modernization of East Falls Station on the Manayunk/Norristown Regional Rail Line that will make the station fully ADA accessible. Work includes installing high level platforms and new passenger shelters; elevators; accessible pathways and handrails/guardrails; new signage and lighting; storm water management systems and landscaping.	$19.50 M	FY 2022 - 2028 Project	Philadelphia	Philadelphia
Regional Rail Stations				
Stations programmed in FY 2022 - 2028 will be modernized and made ADA accessible. A detailed scope of work will be developed for these stations as they are designed:				
• Devon Station on the Paoli/Thorndale Regional Rail Line	$20.00 M	2022 - 2028 Project	Chester	Bucks Chester Delaware Montgomery Philadelphia
• Hatboro Station on the Warminster Regional Rail Line	$7.15 M	2022 - 2028 Project	Montgomery	
• Lawndale Station on the Fox Chase Regional Rail Line	$11.50 M	2022 - 2028 Project	Philadelphia	
• Marcus Hook Station on the Wilmington/Newark Regional Rail Line	$22.50 M	2022 - 2028 Project	Delaware	
• Roslyn Station on the Warminster Regional Rail Line	$6.50 M	2022 - 2028 Project	Montgomery	
• Wyndmoor Station on the Chestnut Hill East Regional Rail Line	$19.50 M	2022 - 2028 Project	Philadelphia	
• Wynnewood Station on the Paoli/Thorndale Regional Rail Line	$19.50 M	2022 - 2028 Project	Montgomery	
Transit & Regional Rail Stations Program — *Rail Transit* (FY 2017 - 2021)				
5th Street Station				
Rehabilitation and improvements to the 5th Street Station on the Market-Frankford Line. Work includes ADA accessibility upgrades; critical structural repairs and waterproofing; improvements to platforms and stairways; new fare payment, security and communication systems; new finishes, signage and lighting.	$13.00 M	Design 2014 - 2016 Construction 2017 - 2019	Philadelphia	Philadelphia

STATIONS, LOOPS AND PARKING IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
11th Street Station				
Improvements to 11th Street Station on the Market-Frankford Line that will make the station fully ADA accessible. The project provides for installation of elevators and accessibility improvements; renovation of existing platforms and station interior; new signage, lighting and security cameras; and waterproofing improvements.	$9.50 M	Design 2020 - 2022 Construction 2022 - 2028	Philadelphia	Philadelphia
40th Street Station				
Improvements to 40th Street Station on the Market-Frankford Line that will make the station fully ADA accessible. The scope of work will consist of improvements to platforms and stairways; installation of elevators; construction of head-houses for the elevators and station entrances at street level; new lighting, signage, security features and passenger amenities; drainage and waterproofing improvements; and Art-in-Transit.	$10.92 M	Design Complete Construction 2015 - 2017	Philadelphia	Philadelphia
Arrott Transportation Center (Margaret/Orthodox Station)				
Improvements at Arrott Transportation Center (Margaret/Orthodox Station) on the Market-Frankford Line that will make the station ADA accessible. Includes installation of one elevator to connect the street and platform level of the elevated station, and two accessible elevators to connect the platform level to the East Station overpass. Other accessibility improvements include new curb ramps, sidewalk repaving and ADA-compliant signage. This project also provides for new platforms with tactile edging; repair/replacement of stairways, handrails, new metal wall panels, tile wall finishes and canopy roof; safety and security enhancements including lighting, power and communication system upgrades; and Art-in-Transit.	$38.46 M	Design Complete Construction 2015 - 2018	Philadelphia	Philadelphia

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Center City Concourses Multi-phase improvements to the Center City Concourses to improve accessibility and bring the concourse network to a good state of repair. This program will revitalize the concourse network with new finishes, lighting and security features; develop the concourse as a place of interest, providing a safe and pleasant environment for pedestrians; and provide potential opportunities for development in the South Broad Concourse. Infrastructure improvements will include structural rehabilitation, new drainage and electrical upgrades. Early action items include replacement of the two escalators at 15th Street and replacement of an escalator and an elevator at 8th Street; mitigation of water infiltration and structural repairs; South Broad concourse improvements; Emergency Call Box replacement (complete); and signage improvements. Major capital improvements will be advanced in the following phases: • Phase 1: Center Square under South Penn St. passing over South Broad concourse and terminating at Juniper St. adjacent to the Macy's store entrance. • Phase 2: Concourse from East Suburban Station entrance adjacent Love Park continuing in front of the Municipal Services Building and terminating at the Market East Concourse (North). • Phase 3: Concourse from 15th Street Station to Dilworth Park and West Trolley entrance. • Phase 4: East Market Street Concourse (North and South Corridors). • Phase 5: 8th Street concourse on North and South side of Market Street. • Phase 6: Corridors under City Hall Plaza from City Hall Station to Juniper Street. • Phase 7: Corridors in Suburban Station between 17th and 16th Streets • Phase 8: South Broad concourse from City Hall to Spruce Street.	$59.65 M	All Phases: Design 2014 - 2017 Construction 2014 - 2021	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia

STATIONS, LOOPS AND PARKING IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
South Broad Street Line Station (Snyder or Tasker-Morris)				
Improvements will make the station fully ADA accessible. The project provides for installation of elevators and accessibility improvements; renovation of existing platforms and station interior; new signage, lighting and security cameras; and waterproofing improvements.	$7.00 M	Design 2020 - 2021 Construction 2021 - 2023	Philadelphia	Philadelphia
Susquehanna-Dauphin Station				
Modernization of the Susquehanna-Dauphin Station on the Broad Street Line to make the Station fully ADA accessible. The project includes the installation of elevators; relocating the existing head house and replacing with a covered head house; accessible pathways and handrails/guardrails; signage; lighting; and security cameras.	$14.90 M	Design 2016 - 2017 Construction 2018 - 2020	Philadelphia	Philadelphia
Villanova Station on the Norristown High Speed Line				
Improvements will make the station fully ADA accessible. Rehabilitation of station facilities, including improvements to existing platforms and shelters; accessibility improvements including ramps and handrails/guardrails; new signage, lighting and security cameras; and stormwater management.	$6.00 M	Design 2017 - 2019 Construction 2019 - 2020	Delaware	Delaware Montgomery
Transit & Regional Rail Stations Program— *Rail Transit* (FY 2022 - 2028)				
Erie Station				
Installation of three (3) ADA-compliant elevators at Erie Station on the Broad Street Line. One elevator will move customers between the street level and the mezzanine level of the station. The other two elevators will be located within the paid areas of the mezzanine level and will serve the north and south platforms. The project will also provide for the construction of head houses for the elevator and station entrances at street level; new signage, security features, and passenger amenities; and drainage and waterproofing improvements.	$9.00 M	2022 - 2028 Project	Philadelphia	Philadelphia

STATIONS, LOOPS AND PARKING IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Escalator/Elevator Improvements (Systemwide)				
Modernization and upgrades to escalators and elevators throughout the SEPTA system to maintain a state of good repair.	$22.78 M	2022 - 2028 Project	Delaware Montgomery Philadelphia	Delaware Montgomery Philadelphia
Rail Transit Stations				
Renovation of transit stations and accessibility improvements, including rehabilitation of platforms and station interiors; accessible pathways and handrails/guardrails; installation or modernization of elevators and escalators; new signage, lighting and security cameras; and drainage and waterproofing improvements. A detailed scope of work will be developed for these stations as they are designed:				
• Fairmount Station on the Broad Street Line	$18.00 M	2022 - 2028 Project	Philadelphia	Philadelphia
• Hunting Park on the Broad Street Line	$5.50 M	2022 - 2028 Project	Philadelphia	Philadelphia
Wyoming Station				
Improvements to Wyoming Station on the Broad Street Line that will make the station accessible. Includes installation of elevators; rehabilitation of existing platforms and station interior; accessible pathways and handrails/guardrails; new signage, lighting and security cameras; and drainage and waterproofing improvements.	$5.00 M	2022 - 2028 Project	Philadelphia	Philadelphia

STATIONS, LOOPS AND PARKING IMPROVEMENTS

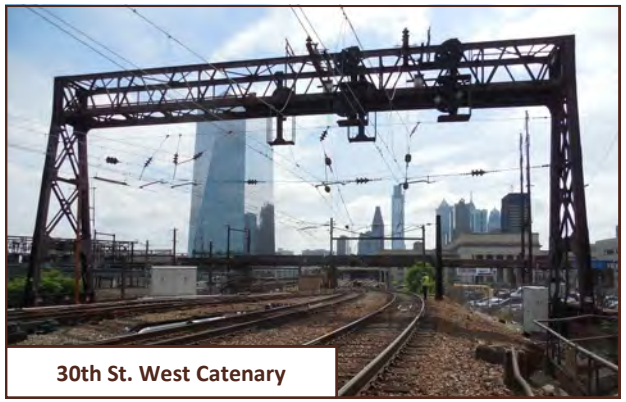
Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Transit & Regional Rail Stations Program— Bus & Trolley Loops **(FY 2017 - 2021)**				
Modernization of bus and trolley loops including accessibility improvements and enhancements to shelters, loading platforms, lighting, landscaping and operator bathroom facilities. Locations include:				
• Bethlehem Pike	$1.75 M	Design 2021 - 2022 Construction 2022 - 2023	Philadelphia	Philadelphia
• City Avenue Bus Turnaround	$5.28 M	Design 2016 - 2017 Construction 2017 - 2018	Philadelphia	Philadelphia
• Westmoreland	$1.75 M	Design 2018 - 2019 Construction 2019 - 2020	Philadelphia	Philadelphia
• Wissahickon Transportation Center	$10.50 M	Design 2017 - 2019 Construction 2020 - 2022	Philadelphia	Philadelphia
Transit & Regional Rail Stations Program— Bus & Trolley Loops **(FY 2022 - 2028)**				
Modernization of bus and trolley loops including accessibility improvements and enhancements to shelters, loading platforms, lighting, landscaping and operator bathroom facilities. Locations include:				
• Ridge & Summit	$1.75 M	2022 - 2028 Project	Philadelphia	Philadelphia
• Rising Sun & Olney	$1.75 M	2022 - 2028 Project	Philadelphia	Philadelphia
• Wycombe	$2.00 M	2022 - 2028 Project	Delaware	Delaware

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Villanova Station				
This project will modernize Villanova Station on the Paoli/Thorndale Regional Rail Line, making the station fully ADA accessible and will advance in phases. Phase 1 will improve station accessibility and will include construction of a new, wider pedestrian tunnel with access ramps and stairs, additional parking spaces, stormwater management improvements, new signage, lighting, and passenger amenities. Phase 2 will make the station fully ADA accessible and includes full length high-level platforms, new canopies, station building improvements, passenger shelters and passenger amenities.	Phase 1: $20.15 M Phase 2: $10.45 M	Phase 1 Design Complete Construction 2016 - 2018 Phase 2 Design 2016 - 2017 Construction 2018 - 2021	Delaware	Delaware Montgomery Philadelphia

SUBSTATIONS AND POWER IMPROVEMENTS

Many of SEPTA's railroad and transit substations were built in the 1920s and 1930s. In order to bring these substations up to modern standards of reliability and performance, they must be overhauled or replaced. Work includes replacing transformers, trolley breakers, feeder switches, substation switchgears and protective relaying. These projects will replace existing equipment with modern indoor switchgear and state-of-the-art industry safety systems, communications and relay protection systems, and will provide additional power and reliability.

Power infrastructure must also be brought to a state of good repair. These include several catenary replacement projects, and upgrading 80+ year old Regional Rail infrastructure.



30th St. West Catenary

Substations and Power - Program Elements	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022 - 2028	12-Year Program Total	Beyond FY 2028	Total Budget
	$Millions									
Substations	$28.88	$15.90	$26.10	$22.00	$22.00	$22.00	$128.27	$236.27	$64.17	$329.32
Power Improvements	$3.22	$5.37	$6.25	$7.83	$13.10	$13.32	$38.10	$83.97	$3.31	$90.50
TOTAL	$32.10	$21.27	$32.35	$29.83	$35.10	$35.32	$166.37	$320.24	$67.48	$419.82

Chestnut Hill East Substation

Morton Substation

Lenni Substation

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Railroad Substations (FY 2017 - 2021)				
Ambler Substation				
Overhaul of Ambler Substation on the Lansdale/Doylestown Regional Rail Line. Work includes installing new transformers, trolley breakers, feeder breakers, substation switchgear and protective relaying. This project will replace the major power components of the substation that are 80+ years old.	$10.88 M	Design Complete Construction 2014 - 2016	Montgomery	Bucks Montgomery
Jenkintown Substation				
Construction of a new Traction Power Substation to replace the Jenkintown Substation of the former Reading Railroad System, which was built in 1931. The new substation will include new transformers, indoor switchgear, state-of-the-art industry standard safety systems, communication systems, relay protection systems and a new road for access to the site.	$34.05 M	Design Complete Construction 2014 - 2016	Montgomery	Bucks Montgomery Philadelphia
Morton & Lenni Substations				
Overhaul of the Morton and Lenni Substations on the Media/Elwyn Regional Rail Line. Work includes installing new transformers, transformer breakers, trolley breakers, trolley and feeder switches, substation switchgear and protective relaying. This project will replace the major power components of the substations that were originally built in the 1920s.	$18.14 M	Design Complete Construction 2015 - 2016	Delaware	Delaware Philadelphia
Wayne Junction Static Frequency Converters (SFC) #1-4				
The major components of the three existing static frequency converters, located adjacent to Wayne Junction Substation, are past their useful lives. SFCs are necessary to convert 230 kV 60 Hz power provided from PECO into a one-of-a-kind 24/12 kV 25 Hz auto transformer system. The construction of a new #4 converter must be completed before the overhauls of the three others in order to keep service at 100% during all phases of construction. After SFC #4 is replaced with a new converter, SFC #1 will be overhauled, followed by SFC #2 and #3.	$55.75 M	Design 2015 - 2018 Construction 2016 - 2021	Philadelphia	Bucks Montgomery Philadelphia

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Multimodal Substation Overhaul Program (FY 2017 - 2021)				
Substation Design and Equipment Purchase				
Design of improvements to seven transit substations (Market, Ellen, Ranstead, Park, Broad, Louden and Castor) and ten railroad substations (Neshaminy, Bethayres, Yardley, Lansdale, Chestnut Hill East, 18th/12th/Portal, Hatboro and a new substation at Woodbourne). The program also includes the purchase of equipment such as auto transformers and circuit breakers that will be required for the substation improvement projects.	$25.77 M	Design / Procurement 2016 - 2021	Bucks Montgomery Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Railroad Substations - Lansdale, Chestnut Hill East, 18th/12th/Portal, Hatboro				
Overhaul of the following railroad substations. Work includes new transformers, trolley breakers, feeder breakers, substation switchgear and protective relaying. Design is being done as part of the Substation Design and Equipment Purchase project (see description above). • Lansdale Substation on the Lansdale/Doylestown Regional Rail Line • Chestnut Hill East Substation on the Chestnut Hill Regional Rail Line • 18th St./12th St./Portal Switching Stations in the Center City Tunnel • Hatboro Substation on the Warminster Regional Rail Line	$25.24 M	Construction 2017 - 2021	Montgomery Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Railroad Substations - Neshaminy, Bethayres, Yardley				
Overhaul of the following railroad substations. Work includes new transformers, trolley breakers, feeder breakers, substation switchgear and protective relaying. Design is being done as part of the Substation Design and Equipment Purchase project (see description above). • Bethayres Substation on the West Trenton Regional Rail Line • Neshaminy Substation on the West Trenton Regional Rail Line • Yardley Substation on the West Trenton Regional Rail Line	$24.58 M	Construction 2017 - 2021	Bucks Montgomery	Bucks Montgomery Philadelphia

SUBSTATIONS AND POWER IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Transit Substations - Market, Ellen, Ranstead Overhaul of the following transit substations. Work includes replacement and upgrade of existing breakers, rectifiers, transformers, relays and switch gears. Design is being done as part of the Substation Design and Equipment Purchase project (see description above). • Market Substation on Market Street, serving the Market-Frankford Line and City Trolley Lines • Ellen Substation at Front & Ellen Streets, serving the Market-Frankford Line and a portion of the Rt. 15 Trolley • Ranstead Substation on Ranstead Street, serving the Market-Frankford Line and a portion of the Trolley Lines	$18.68 M	Construction 2018 - 2022	Philadelphia	Philadelphia
Transit Substations - Park, Broad, Louden, Castor Overhaul of the following transit substations. Work includes replacement and upgrade of existing breakers, rectifiers, transformers, relays and switch gears. Design is being done as part of the Substation Design and Equipment Purchase project (see description above). • Park Substation at Cumberland & Park Streets, serving the Broad Street Line • Broad Substation on Mt. Vernon Street, serving the Broad Street Line • Louden Substation at Carlisle & Louden Streets, serving the Broad Street Line and Rt. 75 Trackless Trolley • Castor Substation on Castor Avenue, serving the Route 59 Trackless Trolley	$19.95 M	Construction 2017 - 2021	Philadelphia	Philadelphia
Woodbourne Substation Construction of new Traction Power and Signal Power Substation on the West Trenton Regional Rail Line. Design is being done as part of the Substation Design and Equipment Purchase project (see description above).	$23.49 M	Construction 2019 - 2023	Bucks	Bucks Montgomery

SUBSTATIONS AND POWER IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Railroad Substations (FY 2022 - 2028)				
Allen Lane Substation				
Overhaul of the Allen Lane Substation on the Chestnut Hill West Regional Rail Line. Work includes new transformers, trolley breakers, feeder breakers, substation switchgear and protective relaying.	$15.00 M	2022 - 2028 Project	Philadelphia	Philadelphia
Brill Substation Overhaul				
Replacement of major power components at Brill Substation, originally built in 1985. Work includes installing new transformers, trolley breakers, feeder breakers, substation switchgear and protective relaying.	$12.80 M	2022 - 2028 Project	Philadelphia	Philadelphia
Transit Substations (FY 2022 - 2028)				
Transit Substation Program				
Multi-year overhaul of transit substations. Work includes installing new breakers, rectifiers, transformers, relays and switch gear.	$45.00 M	2022 - 2028 Project	Philadelphia	Philadelphia

SUBSTATIONS AND POWER IMPROVEMENTS

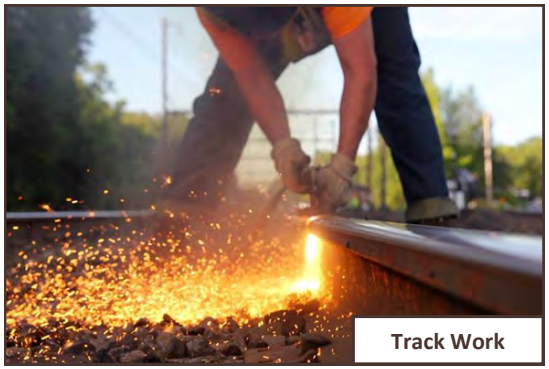
Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Power Improvements (FY 2017 - 2021)				
30th Street West Catenary Replacement				
Replacement and upgrade of the overhead catenary system including catenary structures from 30th Street Station to 'K' Interlocking and the Powelton Yard Complex.	$77.00 M	Design 2015 - 2018 Construction 2018 - 2021	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Airport Line Catenary Replacement				
Replacement and upgrade of the overhead catenary system for the Airport Regional Rail Line.	$1.00 M	Design 2018 - 2019 Construction 2019 - 2021	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Chestnut Hill East Line Catenary Replacement				
Replacement and upgrade of the overhead catenary system for the Chestnut Hill East Regional Rail Line.	$5.50 M	Design 2020 - 2021 Construction 2022 - 2024	Philadelphia	Philadelphia
Fox Chase Line Catenary Replacement				
Replacement and upgrade of the overhead catenary system for the Fox Chase Regional Rail Line.	$2.75 M	Design 2021 - 2022 Construction 2022 - 2024	Philadelphia	Philadelphia

SUBSTATIONS AND POWER IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Power Improvements (FY 2022 - 2028)				
Regional Rail Power Feeder Cable Improvements				
This project will replace the power feeder cable on Regional Rail Lines.	$3.00 M	2022 - 2028 Project	Regional Rail System	Bucks Chester Delaware Montgomery Philadelphia
Wayne Junction Yard Catenary Replacement				
Replacement and upgrade of the overhead catenary system for the Regional Rail Wayne Junction Yard.	$1.25 M	2022 - 2028 Project	Philadelphia	Bucks Chester Delaware Montgomery Philadelphia

TRACK AND RIGHT-OF-WAY IMPROVEMENTS

This program will provide for improvements to SEPTA's track and right-of-way. SEPTA operates rail service over 359 one-way route miles of track (including track owned by SEPTA, Amtrak, the City of Philadelphia, and CSX). Projects will return rail infrastructure to a state of good repair and help preserve rail transit service for current and future customers. SEPTA's Rebuilding the System capital program includes projects across the transit and Regional Rail systems that will renew street track and special work, replace continuous welded rail (CWR), and renew ties and timbers. This program also focuses on the stabilization of soil and rock slopes, stormwater control, erosion control, soil compaction, earth-bridge construction, and the repair and prevention of sinkholes in the right-of-way and track areas.



Track Work

Track and Right-of-Way - Program Elements	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022-2028	12-Year Program Total	Beyond FY 2028	Total Budget
	$Millions									
Track and Right-of-Way	$9.85	$3.79	$4.14	$4.20	$4.70	$4.60	$33.41	$54.84	$41.75	$106.44
TOTAL	$9.85	$3.79	$4.14	$4.20	$4.70	$4.60	$33.41	$54.84	$41.75	$106.44

Street Track Renewal

Norristown High Speed Line Track

TRACK AND RIGHT-OF-WAY IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Transit Projects (FY 2017 - 2021)				
Market-Frankford Line Bridge Street Yard Program				
Renewal of yard tracks including 3rd rail for the Market-Frankford Line at the Bridge Street Yard.	$3.00 M	Construction 2019 - 2020	Philadelphia	Philadelphia
Norristown High Speed Line Tie Replacement and Continuous Welded Rail				
40% Renewal of ties and timbers, and conversion of 100 pound rail to 115 pound rail for the Norristown High Speed Line (NHSL), including track surfacing, and new special track work. Project includes the use of special rail equipment including a tie handler, tie inserter/extractor, tamper, spiker and spike puller.	$26.00 M	Design Complete Construction 2014 - 2023	Delaware Montgomery	Delaware Montgomery
Route 101/102 Yard Tracks Program				
Renewal of yard tracks and special track work for the Route 101/102 Trolley (Media/Sharon Hill Lines) at the 69th Street maintenance complex.	$5.69 M	Construction 2018 - 2019	Delaware	Delaware
Transit Projects (FY 2022 - 2028)				
Route 10, 11, 13 and 36 Track Improvements				
Renewal of street track on the following Trolley Routes: • Trolley Route 11 along Woodland Avenue from 58th to 60th Street. • Trolley Route 36 along Elmwood Avenue from 59th to 65th Street. Also includes special track work replacement at Elmwood Yard. • Trolley Route 10 along Lancaster Avenue from Girard Avenue to 52nd Street, and along Lansdowne Avenue from 52nd Street to 63rd Street. • Trolley Route 13 - "S" curves at 65th and Chester, and along Cobb's Creek / Chester Ave. between 65th and Yeadon Loop.	$10.00 M	2022 - 2028 Project	Philadelphia	Delaware Philadelphia

TRACK AND RIGHT-OF-WAY IMPROVEMENTS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Trolley Diversion Routes and Revenue/Non-Revenue Track Improvements				
Renewal of street track and special track work on City Transit Division trolley diversion routes and non-revenue routes. Trolley diversion routes are used to transport customers to 40th Street Station on the Market Frankford Line when the tunnel portion of the trolley line for Routes 10, 11, 13, 34 and 36 is out of service for maintenance. Non-revenue tracks are used by trolleys heading to and from Elmwood and Callowhill Shops/Yards. The project also includes renewal of track on additional segments of Trolley Routes 10, 11, 13, 34 and 36.	$27.25 M	2022 - 2028 Project	Philadelphia	Philadelphia
Railroad Projects (FY 2022 - 2028)				
Norristown Station 3rd Track				
Construction of a third track at Norristown Station to separate freight rail service from passenger rail service and facilitate the opportunity for increased frequency on SEPTA's Manayunk/Norristown Regional Rail Line. The Norristown Regional Rail Station will be reconstructed and made fully ADA accessible as part of this project.	$34.50 M	2022 - 2028 Project	Montgomery	Montgomery

VEHICLE ACQUISITIONS AND OVERHAULS

Per SEPTA FY 2015 Operating Statistics, SEPTA's revenue vehicle fleet consists of 1,380 buses, 932 rail vehicles, 38 trackless trolleys and 457 paratransit vehicles. SEPTA also operates a fleet of non-revenue vehicles and equipment which are used for construction, vehicle and facility maintenance and service supervision. Revenue vehicles are overhauled on a planned schedule to maintain a quality state of good repair throughout a vehicle's service life. This program will replace vehicles and equipment that have exceeded their useful life, or, in the case of the trolleys and Silverliner IVs, have far exceeded their design service life. This program will also provide for fleet expansion to meet present and projected increases in ridership demand. Regional Rail ridership has increased by 50% in the last 17 years. SEPTA will be reviewing financing options, such as the issuance of bonds and loans, to assist in the advancement of the rail vehicle procurements included in this program. In addition, to accommodate new vehicles, SEPTA is conducting cross disciplinary systems analyses for both trolleys and Regional Rail vehicles to determine potential costs associated with infrastructure needs as well as operational and service impacts.

Revenue Vehicle Inventory

Regional Rail Locomotives	8
Push/Pull Cars	45
Silverliner IV's	231
Silverliner V's	120
MFSE Cars	218
BSS Cars	125
NHSL Cars	26
City LRV Trolleys	112
City PCC Trolleys	18
Suburban Trolleys	29
Buses	1,380
Trackless Trolleys	38
Paratransit Vehicles	457

Vehicle Acquisitions and Overhaul - Program Elements	Prior Funding	Budget Year FY 17	Program Years FY 18	FY 19	FY 20	FY 21	FY 2022-2028	12-Year Program Total	Beyond FY 2028	Total Budget
	$Millions									
Bus Purchase Program	$15.10	$60.00	$70.00	$70.00	$70.00	$70.00	$490.00	$830.00	$0.00	$845.10
Paratransit Vehicle Acquisition	$0.00	$7.00	$7.00	$7.00	$7.00	$7.00	$49.00	$84.00	$0.00	$84.00
Regional Rail Electric Locomotive Acq.	$30.52	$15.50	$62.85	$53.13	$0.00	$0.00	$0.00	$131.48	$0.00	$162.00
Regional Rail Multi-Level Railcar Acq.	$41.88	$0.00	$0.00	$0.00	$37.54	$54.09	$61.12	$152.75	$0.00	$194.63
Regional Rail Silverliner IV Replacement	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$122.43	$122.43	$977.57	$1,100.00
Trolley Acquisition	$1.40	$0.50	$2.50	$5.50	$8.69	$19.19	$675.22	$711.60	$0.25	$713.25
Utility Vehicle Renewal	$0.00	$10.00	$10.00	$10.00	$6.00	$6.00	$42.00	$84.00	$0.00	$84.00
Vehicle Overhaul Program	$0.00	$75.00	$75.00	$76.00	$77.00	$78.00	$574.00	$955.00	$0.00	$955.00
TOTAL	$88.90	$168.00	$227.35	$221.63	$206.23	$234.28	$2,013.77	$3,071.26	$977.82	$4,137.98

Electric Locomotives

40-Ft. Hybrid Buses

Multi-Level Railcar

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Bus Purchase Program (FY 2017 - 2028)				
SEPTA's Bus Fleet Management Plan provides for the acquisition of different size buses based upon needs and route characteristics. The current bus fleet consists of a variety of buses ranging from 60-foot articulated and 40-foot buses for heavy use routes to 27-foot and 30-foot buses for suburban circulator and contracted service routes. SEPTA's current 275 bus purchase contract includes 90 40-foot hybrid buses and 185 60-foot articulated hybrid buses. Delivery of the final 30 60-foot buses will occur by the end of Calendar Year 2016. With the completion of this bus purchase, SEPTA will have a total of 747 hybrid buses in its fleet - over half of SEPTA's bus fleet. In September 2015, SEPTA awarded a contract for 35 30-foot low-floor clean diesel buses. These buses, which were previously funded, are scheduled to be delivered by the end of Calendar Year 2016. Beginning in Fiscal Year 2017, a 525 40-foot low-floor hybrid bus purchase program is scheduled to commence with buses to be delivered over a five year period. In April 2016, SEPTA was awarded $2.6 million in federal compe e "Low or No-Emission" Vehicle Deployment grant funds, which will assist in the acquis on of 25 Proterra b ery electric buses and related equipment. These buses will be deployed on SEPTA Bus Routes 29 and 79 in South Philadelphia. Buses are scheduled for delivery in 2018.	$845.10 M (12 Year Total)	40-Ft. Hybrid Bus Purchase $467.96 M 525 Buses Delivery 2017 - 2021 40-Ft. Electric Bus Purchase $23.86 M 25 Buses Delivery 2018 Balance of Program $353.28 M 2022 - 2028	Bucks Chester Delaware Montgomery Philadelphia	Bucks Chester Delaware Montgomery Philadelphia

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Paratransit Vehicle Purchase (FY 2017 - 2028)				
SEPTA routinely acquires new revenue vehicles for its paratransit and shared-ride services to replace vehicles that have exceeded their useful life of five years. These vehicles are provided to private carriers, which operate the services and maintain the vehicles under contract to SEPTA. SEPTA ownership of these vehicles provides the following benefits: • The flexibility to rapidly exchange vehicles between carrier networks should the need arise. • Creates an economic incentive for carriers to provide quality service. • More control over fleet composition and standardization of the fleet. • More control over vehicle design features. In Calendar Year 2017, 77 vehicles are scheduled for delivery consisting of 17 lift-equipped mini-buses, 40 twelve-passenger mini-buses without wheelchair lifts and 20 high-capacity lift-equipped mini-buses.	$84.00 M	Annual delivery to replace vehicles beyond their useful life	Bucks Chester Delaware Montgomery Philadelphia	Bucks Chester Delaware Montgomery Philadelphia
Regional Rail Electric Locomotive Acquisition (FY 2017 - 2021)				
This project provides for the acquisition of new electric locomotives. The acquisition of new locomotives will allow SEPTA to retire its current, life-expired locomotives and accommodate the planned acquisition of new multi-level push-pull railcars to address growing ridership. A contract was awarded to Siemens Industry Inc., Mobility Division in July 2015 for thirteen ACS-64 locomotives with an option for up to an additional five. These locomotives are more powerful than SEPTA's current fleet and the state-of-the-art electronics will provide significantly increased reliability. The locomotives will come equipped with SEPTA's Positive Train Control system. Supporting SEPTA's Sustainability initiatives, the ACS-64 locomotives feature regenerative braking. This capability enables energy from the train's motion to be fed back to the power system for use by other trains when slowing down. In addition, the traction and locomotive control system of the ACS-64 connects all subsystem computers, input/output stations as well as the consoles in the ergonomically-designed cab. Through the cab consoles, the engineer can monitor the performance of all locomotive systems in real time, and maintenance technicians can troubleshoot problems with an integrated maintenance manual.	$162.00 M	Contract Award Complete Delivery 2018	Regional Rail System	Bucks Chester Delaware Montgomery Philadelphia Delaware (state) New Jersey

VEHICLE ACQUISITIONS AND OVERHAULS

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Regional Rail Multi-Level Car Acquisition (FY 2017 - 2021)				
This project provides for the acquisition of 45 new multi-level push-pull passenger railcars. These cars are required to accommodate growing ridership and increased service capacity needs on SEPTA's Regional Rail system. These cars are additions to SEPTA's current fleet of 45 push-pull railcars. The new cars will fully comply with Americans with Disabilities Act (ADA) requirements and federal and state regulations regarding safety features and systems. The cars will include passenger amenities, such as wider aisles, a state-of-the-art climate control system, bicycle storage area and WiFi. The new cars will have electronic exterior and interior destination signs, voice annunciation and corresponding display on video screens of train destination and upcoming station stops. In addition, the new railcars will be equipped with on-board video surveillance and automatic passenger counting systems.	$194.63 M	Contract Award 2016 Delivery 2019 - 2020	Regional Rail System	Bucks Chester Delaware Montgomery Philadelphia Delaware (state) New Jersey
Regional Rail Silverliner IV Replacement (FY 2022 - 2028)				
This project provides for the purchase of new railcars to replace SEPTA's Silverliner IV railcar fleet. The Silverliner IV railcars were built between 1974 and 1976, and by the time of replacement, the cars will be well past their expected useful life. Vehicles acquired will fully comply with Americans with Disabilities Act (ADA) requirements and federal and state regulations regarding safety features and systems.	$1,100.00 M	2022 - 2028 and Beyond Project	Regional Rail System	Bucks Chester Delaware Montgomery Philadelphia Delaware (state) New Jersey

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Trolley Acquisition (FY 2022 - 2028)				
This project provides for the purchase of new trolleys for City Transit Routes 10, 11, 13, 15, 34, 36 and Suburban Transit Routes 101 & 102. These rail transit lines currently operate with 141 light rail vehicles that were built in 1981, as well as 18 "Presidential Conference Committee" (PCC-II) cars originally manufactured in 1947 and rebuilt by Brookville Equipment Company in 2003-2004. SEPTA will be advancing a Trolley Infrastructure and System Modernization program in support of the new trolleys. The trolleys will require a complex and closely interrelated series of infrastructure upgrades in areas such as communications, signals, power supplies, subway station and in-street stop upgrades, track and bridge improvements, fare payment and trolley maintenance. The goals of the Trolley Modernization Program are: • A system in full compliance with the Americans with Disabilities Act (ADA), • A safe and improved customer experience that will leverage modern light rail vehicles and associated infrastructure upgrades to provide faster, more reliable transit service, • Controlled vehicle acquisition costs by providing a faster, higher capacity service, • Reduced operating costs through fleet right-sizing based on faster, higher capacity service. SEPTA has been working with stakeholders through a visioning and conceptual design process led by the Delaware Valley Regional Planning Commission. In addition to the vehicle acquisition and infrastructure improvements, the planning process will also evaluate the feasibility of trolley service restoration on Routes 23 and 56. The rebuilding of Richmond Street on the eastern end of Route 15, in partnership with PennDOT and the City of Philadelphia Streets Department, will provide a real-life prototype opportunity to test concepts for the transformation of how the trolleys and streetscape inter-relate.	$713.25M	2022 - 2028 Project	Delaware Philadelphia	Delaware Philadelphia

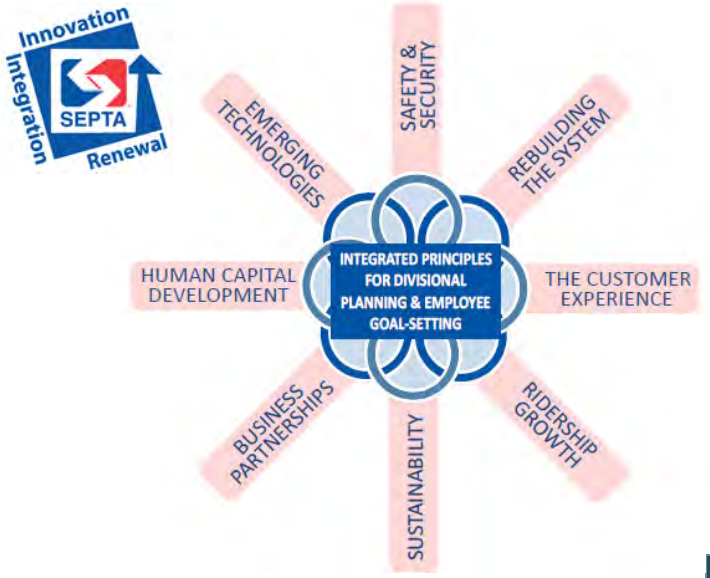
Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Utility Fleet Renewal (FY 2017 - 2028)				
The Utility Fleet Renewal Program is a comprehensive effort to upgrade and replace the Authority's utility fleet and automotive service fleet. SEPTA utility vehicles support transit and railroad operations. In order to have adequate and reliable utility vehicles, SEPTA has developed a program to periodically renew this fleet on a vehicle-by-vehicle basis, contingent upon the vehicle's age, condition and usage within the Authority. The utility fleet comprises the following types of vehicles and equipment: • Utility vehicles and equipment for transit and paratransit supervisors, and SEPTA police officers. • Utility vehicles and equipment for inspection, maintenance and construction of buildings, overhead power systems, communications systems, signal systems and track. These vehicles include trucks, cranes, high rail vehicles and maintenance-of-way equipment. • Transporter vehicles used in garages and shops, including revenue trucks, forklifts for material handling, pick-up trucks for material movement between depots and shops, and for snow removal. • Service vehicles used for vehicle maintenance including wreckers, tow tractors, man lifts and pick-up trucks. • Miscellaneous equipment such as generators, compressors, trailers, floor scrubbers and welding units.	$84.00 M	Ongoing Program	System-Wide	Bucks Chester Delaware Montgomery Philadelphia

Project Descriptions	Budget	Schedule / Status (Calendar Year)	Location	Service Area
Vehicle Overhaul Program (FY 2017 - 2028)				
SEPTA's Vehicle Overhaul Program (VOH) provides for the systematic replacement or upgrade of systems on SEPTA's rolling stock. Vehicles are scheduled for overhauls during their service lives based on vehicle type and age. A vehicle must receive periodic overhauls if it is to optimize performance throughout its useful service life. Prudent fleet management requires a program of preventive maintenance for optimal fleet reliability, service quality, efficient performance, and passenger comfort. Advanced scheduling of vehicle preventive maintenance allows SEPTA to purchase material and produce rebuilt components in an efficient and effective manner. In addition to vehicle overhauls, this program also provides for vehicle campaigns. Campaigns address both critical items and vehicle equipment upgrades and modifications, which are accomplished on a fleet-wide basis. The Vehicle Overhaul Program will allow SEPTA to continue its overhaul of rolling stock, thus ensuring continued safe and reliable service. Highlights of the Fiscal Year 2017 program include the overhaul of 40-foot low floor New Flyer hybrid buses, a prototype of a New Flyer Trackless Trolley, Broad Street B-IV cars, City and Suburban trolleys, Regional Rail Silverliner IV cars, Regional Rail Push-Pull cars, a diesel locomotive, Market Frankford M-4 cars, Norristown High Speed Line N-5 cars, and support vehicles and equipment. Highlights of campaigns for Fiscal Year 2017 include M-4 Bolster End Caps and LCU Software Upgrade. Regional Rail Silverliner IV campaigns include safety, reliability and seat replacement program, rotating equipment change outs, traction motor replacements, wheel and axle replacements, PA amplifier replacement, door indicator modifications, DC to AC Compressor Upgrade, A/C unit overhaul, rebuilding of pantographs, and main transformer conversion.	$955.00 M	Annual program to overhaul a portion of each vehicle fleet	System-Wide	Bucks Chester Delaware Montgomery Philadelphia Delaware (State) New Jersey

FY 2017 CAPITAL BUDGET AND FY 2017-2028 CAPITAL PROGRAM

Appendices

APPENDIX A: STRATEGIC BUSINESS PLAN AND THE CAPITAL PROGRAM



VISION: To be the region's preferred choice for transportation.

SEPTA's Strategic Business Plan for Fiscal Years 2015 through 2019 is the organization's framework for decision-making. The plan outlines a vision, mission, core values, and strategic objectives as guiding principles for all programs and initiatives. It also establishes a series of key performance indicators to measure progress towards goals over time. For more information on SEPTA's Strategic Business Plan, please visit http://www.septa.org/strategic-plan/reports.html.

The Capital Program is a key tool for implementing SEPTA's Strategic Business Plan. The matrix below illustrates the relationship between SEPTA's FY 2015-2019 Strategic Business Plan objectives and the FY 2017-2028 Capital Program.

	Strategic Business Plan Objectives (FY2015-2019)							
Capital Programs	**Safety & Security**	**Rebuilding the System**	**Emerging Technology**	**The Customer Experience**	**Ridership Growth**	**Sustain-ability**	**Human Capital Development**	**Business Partnerships**
Bridge Program	✓	✓				✓		
Communications, Signal Systems & Technology Improvements	✓	✓	✓	✓	✓		✓	✓
Financial Obligations		✓		✓	✓	✓		
Infrastructure Safety Renewal Program	✓	✓	✓	✓		✓	✓	
Maintenance / Transportation Shops and Offices	✓	✓		✓		✓	✓	
Safety & Security	✓	✓	✓	✓				✓
SEPTA Key	✓	✓	✓	✓	✓	✓	✓	
Service Restorations		✓			✓	✓		
Stations, Loops and Parking Improvements	✓	✓		✓	✓	✓		✓
Substations and Power Improvements	✓	✓	✓			✓		
Track and Right-of-Way Improvements	✓	✓			✓	✓		
Vehicle Acquisitions and Overhauls	✓	✓	✓	✓	✓	✓		

APPENDIX B: LONG-TERM PLANNING EFFORTS

SEPTA's current Strategic Business Plan has identified the need for SEPTA to adopt a Long-Range Plan for Capacity Enhancements and Service Expansion as one of the Business Initiatives under the Infrastructure and State of Good Repair Category. A SEPTA Long Range Plan would provide a connected framework for decision making within SEPTA, as well as a crucial link between the planning efforts of key regional stakeholders and SEPTA's long term vision and goals.

The descriptions below provide more detailed information on various transit expansion, community, and regional planning projects. These projects are included to provide information on long-term capital programming and strategic planning conducted by the Commonwealth of Pennsylvania, the Delaware Valley Regional Planning Commission (DVRPC), SEPTA, the City of Philadelphia, Bucks, Chester, Delaware and Montgomery Counties, and other transportation agencies and associations in the region.

Project Descriptions

Expansion Project Planning

King of Prussia Rail – An Extension of the Norristown High Speed Line (NHSL)

Lead Agency: Southeastern Pennsylvania Transportation Authority (SEPTA)

An Alternatives Analysis and Draft Environmental Impact Statement (AA/DEIS) planning study for the extension of the Norristown High Speed Line to the King of Prussia area began in 2012. This planning effort is critical given the changes in the King of Prussia area over the past decade in land use, population growth, the expansion of the King of Prussia Mall (the largest Mall complex in the United States), the formation of a Business Improvement District (BID), and the growing number of SEPTA bus passengers who currently endure unpredictable and longer than desired bus travel times to the area as a result of traffic congestion on area roadways. The goal of the study is to determine a locally preferred alternative for an extension of the existing Norristown High Speed line to the King of Prussia area, providing access to areas such as the King of Prussia Mall, the business park area north of the mall, the Valley Forge National Historical Park and the Valley Forge Casino Resort. The study utilizes a tiered screening process to narrow down the alternatives from an initial long list of 30 potential alternatives to a single recommended locally preferred alternative. The study includes development of capital and operating costs, a simulation of service operations, appropriate environmental review steps as required by the National Environmental Policy Act (NEPA), 3D modeling of the locally preferred alternative, and significant outreach to the public as well as area stakeholders. Ridership modeling for each of the alternatives will also be developed by the Delaware Valley Regional Planning Commission (DVRPC). A recommended locally preferred alternative (LPA) was announced in March 2016 and completion of the Alternatives Analysis and Draft Environmental Impact Statement is anticipated in December 2016.

Broad Street Line Extension – Pattison Avenue to the Philadelphia Navy Yard

Lead Agency: Pennsylvania Department of Transportation (PennDOT) Bureau of Public Transportation, Philadelphia Industrial Development Corporation (PIDC), SEPTA

PIDC received a DVRPC FY 2007 Transportation and Community Development Initiative (TCDI) grant to evaluate transit needs and alternatives for enhancing public transportation connections to Navy Yard redevelopment sites in South Philadelphia, including the extension of the Broad Street Line from its current terminus at AT&T Station. A final feasibility study report was issued in September 2008. In 2014, PennDOT's Bureau of Public Transportation provided funding to update that feasibility study with a Phase 2 Feasibility study which will update the original findings based upon the new 2013 Navy Yard Master Plan and examine the potential to move the extension forward within the FTA New Starts guidance associated with the Fixing America's Surface Transportation Act (FAST Act). The project is expected to release its final report with estimated ridership and capital costs at the end of 2016.

APPENDIX B: LONG-TERM PLANNING EFFORTS

Project Descriptions

Quakertown Branch Rail Restoration – Alternatives Analysis

Lead Agencies: Delaware Valley Regional Planning Commission (DVRPC), Montgomery and Bucks County Planning Commissions

The Alternatives Analysis (AA) study investigated the feasibility of restoring passenger rail service linking Bucks County and North Penn communities with Center City Philadelphia, via Lansdale. The AA examined transit options that would mitigate highway congestion in the Route 309 corridor. This effort was managed by DVRPC, and coordinated with Bucks and Montgomery County Planning Commissions, the TMA of Bucks County and SEPTA. The preliminary findings of that study reflected an approach to restoring service in the Route 309 corridor by recommending electrification of the SEPTA-owned branch line to a terminus point at Pennridge in West Rockhill Township, with some degree of phasing. This project was placed on hold in 2012 pending the FTA finalization of new evaluation criteria for federal transit projects under MAP-21. DVRPC included a project within its FY2016 Work Program to update ridership projections within that corridor. Results of that analysis combined with updated capital costs will determine how to potentially move the project forward.

West Chester Branch Rail Restoration — Feasibility Study

Lead agencies: PennDOT, SEPTA, Advisory Committee to Reestablish Rail Service to West Chester

SEPTA has participated on the Borough of West Chester's steering committee for the Advisory Ad Hoc Committee to Reestablish Rail Service to West Chester. This coordination provided input on their 2015 report, "The Potential of Rail Service to West Chester Borough." The Committee seeks to extend the Media/Elwyn Line—currently undergoing a three-mile service restoration to Wawa—to its former terminus in West Chester. SEPTA will continue to participate in and coordinate with the Committee and is preparing for a further phase of planning that will be funded by the Pennsylvania Department of Transportation.

Long Range Planning

Roosevelt Boulevard

Lead agencies: City of Philadelphia (Office of Transportation and Infrastructure Systems and Philadelphia Streets Department), SEPTA, Pennsylvania Department of Transportation, DVRPC

In 2015, The Delaware Valley Regional Planning Commission (DVRPC) completed the Alternatives Development for the Roosevelt Boulevard Transit Enhancements study. This project took a fresh look at transit needs and developed strategies that could be achieved at grade within the existing cross section, at comparatively lower cost and in a shorter timeframe than the fixed guideway service that has historically been the focus of planning efforts.

The resulting recommendation was for enhanced bus service (EBS) along the Boulevard. SEPTA is working on implementation of this recommendation with our partner agencies in conjunction with the City's TIGER grant award.

The City of Philadelphia was awarded a $2.5 million TIGER (Transportation Investment Generating Economic Recovery) grant in 2014 to develop long-range plans for the Roosevelt Boulevard. Work on this study began in 2015, with PennDOT and SEPTA being core stakeholders. Dedicated transit right-of-way service along the Roosevelt Boulevard remains a long-term ambition that will be pursued with this study.

APPENDIX B: LONG-TERM PLANNING EFFORTS

Project Descriptions

30th Street Station District Plan

Lead agencies and project partners: Amtrak, Brandywine Realty Trust, Drexel University, PennDOT, and SEPTA

The Philadelphia 30th Street Station District Plan will create a single, integrated vision for both the station and its surrounding area. The study boundaries encompass 640 acres bounded by 22nd Street, Walnut Street, 36th Street, Spring Garden Street and the Benjamin Franklin Parkway. The final vision will contain opportunities for community development, economic growth and improved transportation connections. The master planning process involves three main elements of analysis: transportation, the station and associated facilities, and commercial opportunities. Each of these elements will be integrated into a final comprehensive plan for the District.

This process will be guided by the project partners, including SEPTA, with input from the community at public meetings held throughout the two-year timeframe (2014 - 2016). The final District Plan is expected to be published summer 2016.

Long Range Regional Transportation Plan – Connections 2040 Plan for Greater Philadelphia

Lead agency: Delaware Valley Regional Planning Commission (DVRPC)

DVRPC is required to update the Long Range Regional Transportation Plan every five years. The plan addresses transportation, land use, environmental and economic competitiveness policies and includes fiscally constrained transportation projects. The plan was adopted by the DVRPC Board in July 2013 and published in November 2013. With the passage of Act 89, a supplemental amendment was issued to include longer range projects that previously had been deferred due to fiscal constraints. That supplement was released in 2014. The development of an updated Long Range Regional Transportation Plan for 2045 will begin in the summer of 2016, with adoption by the MPO in July 2017.

City of Philadelphia: Philadelphia 2035 Plan

Lead agency: Philadelphia City Planning Commission

Philadelphia2035: The Citywide Vision was the first phase of a large scale comprehensive planning effort for the City of Philadelphia completed in 2012. Recommendations include new and extended transit lines to serve the Roosevelt Boulevard Corridor, access to the Navy Yard, connections to the Central Delaware Waterfront and the Centennial District; and the development of the Jefferson Station and 30th Street Station areas. The Planning Commission is currently in the second phase of Philadelphia2035, establishment of 18 individual District Plans to develop specific recommendations for each area of the City. Other products resulting from Philadelphia2035: The Citywide Vision include The Complete Streets Manual – the balanced use of streets between pedestrians, bicyclists, transit, and vehicles - and The Philadelphia Master Trails Plan.

The following District Plans are underway or completed:

- Underway: Lower Southwest and Upper North
- Completed: Lower South, West Park, Lower Northeast, Central, University Southwest, Lower North, Central Northeast, Lower Northwest, South, Riverwards and North Delaware

SEPTA participates in the district planning process by providing review, analysis and input into the District Plans to ensure consistency and integration of transportation-related planning efforts by all stakeholders.

APPENDIX B: LONG-TERM PLANNING EFFORTS

Project Descriptions

Northeast Corridor (NEC) Commission Actions

Lead agency: NEC Infrastructure and Operations Advisory Commission

Under the Passenger Rail Investment and Improvement Act (PRIIA) of 2008, the NEC Infrastructure and Operations Advisory Commission was established to guide and lead the various planning efforts throughout the Corridor. The NEC Commission directs efforts to redefine the use of the NEC with its recently approved comprehensive cost-allocation methodology that has been adopted by the Northeast Corridor States. Both SEPTA and PennDOT have roles in these efforts. The implementation of full cost allocation by the States and Commuter rail carriers for operating costs and capital investments on the NEC, in addition to a stronger partnership with Amtrak on key decision-making, is ongoing.

NEC Future: A Rail Investment Plan for the Northeast Corridor

Lead agency: Federal Railroad Administration

This study began in 2012 and includes several components: the development of a service plan for the Northeast Corridor (NEC), with consideration of both current and future markets for improved rail service and capacity; a corridor-level environmental impact statement (Tier 1) that considers the impacts to the environment and supports reduction in energy use; and an investment plan for passenger rail on the NEC that can be approached incrementally. Primary among the plan goals is to consider high-speed rail alignments and improve connectivity among rail services and between rail and other modes. SEPTA is participating in the process and providing information to the project team about capital improvements that would enhance commuter rail operations on the NEC. The FRA released this comprehensive environmental impact assessment in the fall of 2015 and will identify its preferred alternative and write a Service Development Plan in 2016.

Other Planning Activities

DVRPC Work Program Studies

Lead agencies: Delaware Valley Regional Planning Commission (DVRPC), member governments, transit organizations

This document outlines all of the federally funded planning projects slated for the nine-county region from July 1, 2015 to June 30, 2016. The listing includes DVRPC projects, as well as projects planned by member governments and transit organizations. The Work Program is developed annually by the DVRPC Board with its planning partners to reflect the region's short-range planning needs. The Fiscal Year 2016 DVRPC Work Program projects that SEPTA will directly contribute to and be the lead stakeholder for include:

- Delaware Avenue Waterfront Trolley Feasibility Study
- Paoli-Thorndale Regional Rail Extension Ridership Study
- Radnor Station Connectivity Study
- Ivy Ridge Station: Ivy Ridge Intermodal Study
- Zoo Transit Connections Feasibility Study

APPENDIX B: LONG-TERM PLANNING EFFORTS

Project Descriptions

Wissahickon Transportation Center Planning

Lead agency: SEPTA; partners include Philadelphia City Planning Commission, Philadelphia Parks & Recreation, Office of Transportation and Infrastructure Systems, Philadelphia Streets Department

Wissahickon Transportation Center (WTC) is one of SEPTA's busiest bus transfer centers, serving an average of 7,000 people with 780 bus trips every weekday across eleven routes. It provides access to destinations such as King of Prussia, Plymouth Meeting, City Avenue, and Northeast Philadelphia, as well as Center City.

Bus operations at WTC have outgrown the existing physical facilities, and expansion plans have been explored collaboratively between SEPTA and other affected agencies as a part of the Lower Northwest District Plan, part of Philadelphia2035. WTC expansion will significantly improve customer experience, allow for new service and extension of existing bus service, reduce multi-modal congestion, enhance safety, and allow for the completion of a major portion of the Schuylkill River Trail. The Wissahickon Transportation Center project is included in the FY 2017 Capital Budget and Fiscal Years 2017 - 2028 Capital Program as part of the Stations, Loops and Parking Improvements program.